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THE SCHOONER C. A. THAYER

REPORT IV

To the State of California
Division of Beaches and Parks

On the History and Restoration

Of the Three-masted Schooner

C. A. THAYER

By

The San Francisco Maritime Museum

San Francisco

May, 1960

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SECTION I

RESTORATION OF THE C. A. THAYER

State of the Program - May, 1960

Restoration of the Cabin

Hoisting and Pumping Machinery

Restoration Details

Access Ladderway to Hold

Modern Wood Preservation Techniques

Notes by G. F. Matthews

STATE OF THE PROGRAM - MAY 1960

Progress

The key step in effecting the marvelous transfiguration of the C. A. THAYER during the last year was the employment of a thoroughly competent marine supervisor in May, 1959, and the subsequent employment of qualified specialists of his choice. Despite the personnel troubles which may be anticipated in any new program, and the necessity of accomplishing considerable work aboard the WAPAMA in order to protect her from further rapid deterioration during the winter season, the THAYER program has been carried forward at a good pace, and, more important, with a sure touch.

The target date for the completion of the C. A. THAYER (at least during this phase of the continuous restoration process) apparently will be met, and the schooner should be in condition to receive visitors by the Fourth of July. The ship is now rapidly approaching the "mopping-up" stage, and IF it is desired to display the vessel this summer, it should be entirely possible to develop and install the necessary minimum interpretive material by the end of June. (We refer to the first thirteen pages of our Report of March, 1959, for a suggested basic interpretation policy.)

Interpretation and Display

Our next Report on the C. A. THAYER will explore display and interpretation possibilities at length. Mr. Dring has, at present, an adequate fund for the furnishing of the cabin -- the most detailed "display area" -- and is currently, with the assistance of the Maritime Museum, purchasing suitable artifacts. Necessarily, the initial collection of relevant "housekeeping" materials (from bait-boxes for the fishermen's forecastle to bud-vases for the captain's bedroom) must be incomplete, and it should be understood that a continuous program of acquisition will be necessary to outfit the schooner more or less thoroughly.

Future Problems of the Program

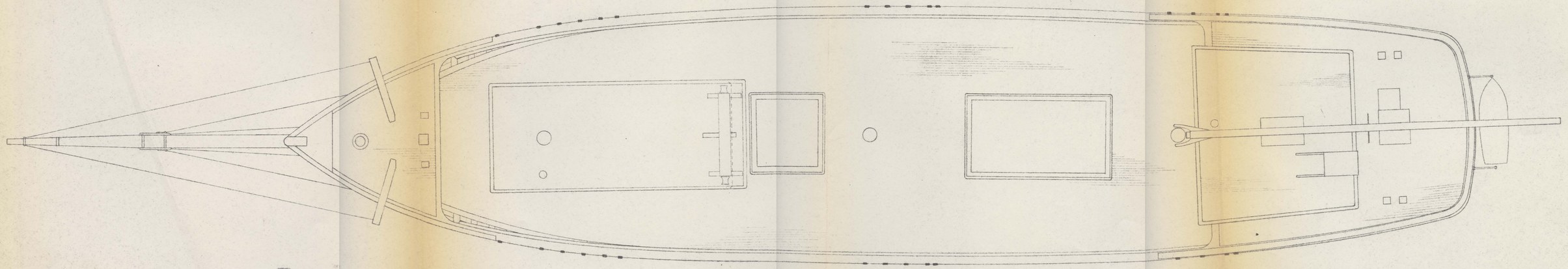
In little more than a month, the Division of Beaches and Parks will have a fine-looking West Coast three-masted schooner restored at great cost to display condition -- floating alongside a broken-down pier at a dreary section of the Oakland waterfront.

As the superlative condition of the THAYER is the best argument for the validity and success of the whole ship restoration program, it would seem that the re-location of the vessel to some site where she may be opened to the public, even on a limited basis, deserves serious consideration.

But if the C. A. THAYER is almost out of the woods -- except for the problem of what to do with her now -- such is not the case with the remaining ships in the program. It is our view that by December of 1960 the present restoration program will begin to bog down unless some additional funds are found, and that the maximum proposals that have been made for personnel and money for fiscal year 1961-62 are apt to be scarcely enough.

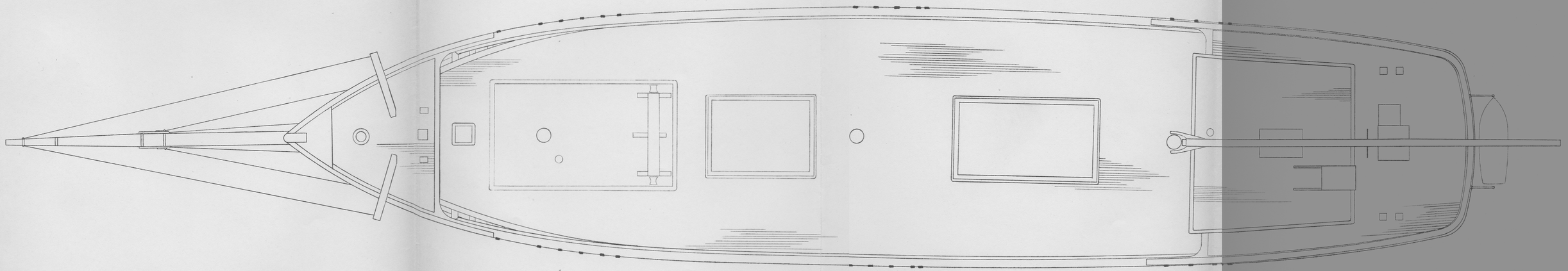
SCHOONER C. A. THAYER

MAYAY 1960



SCHOONER C. A. THAYER

ARRANGEMENT WITH DECKHOUSE
AND FOREHATCH RESTORED



RESTORATION OF THE C. A. THAYER'S CABIN

C. A. THAYER: CABIN RESTORATION

[Submitted separately 8 March 1960]

Layout

Plan of Cabin

Finish

Furnishings

Stateroom Restoration

APPENDIX: RESTORATION OF CABIN, C. A. THAYER

[Submitted separately 20 October 1960]

C. A. THAYER : CABIN RESTORATION

At the end of February, 1960, the restoration of the C. A. THAYER's cabin is so far completed that finishing and furnishing loom as the most pressing problems. The moving of bulkheads, relocation or replacement of mouldings and other fancy work, rehanging or replacement of doors, and removal of sixty years accumulation of paint has been completed. The work now moves into that final phase which will determine the character of the cabin--probably the most attractive and intimate part of the ship--as a display.

Layout

The arrangement of the cabin spaces has been completed along the lines proposed by us last summer and described in some detail in our memorandum of October 20, 1959, (which is appended to this report). The layout which we developed was based largely upon the recollections of Captain Ole Lee, a former master of the C. A. THAYER, and physical evidence uncovered by careful examination of the structure.

One significant departure from what we determined to be the original arrangement was incorporated into the proposed plan: this was the extension of the hall through what had been a portion of the mate's cabin, providing a "through" passageway between the forward and after entrances to the cabin. The exigencies of display and public circulation necessitated this change from the original layout, as is explained in some detail on pp. 19 - 21.

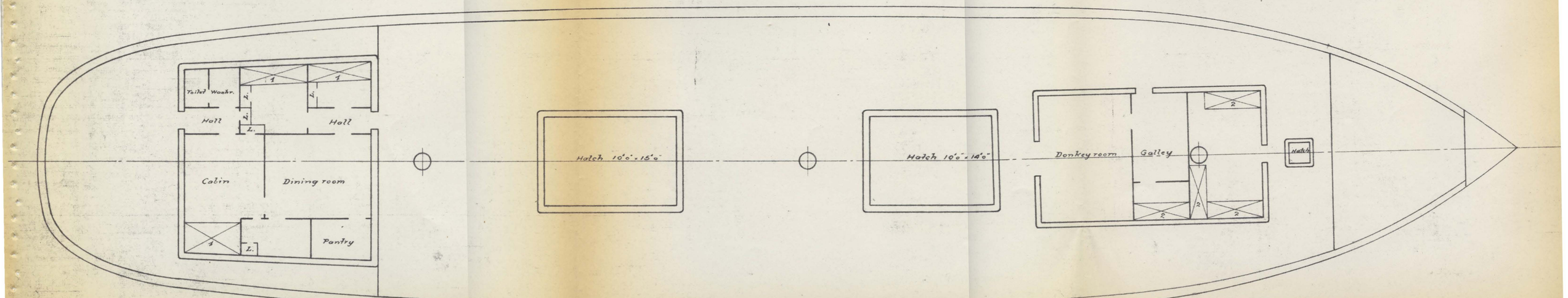
We recently uncovered a tracing, which is reproduced on the following page, of the cabin and deckhouse arrangements of the schooner METHA NELSON, a "sister ship" to the C. A. THAYER. This plan was made when the METHA NELSON was purchased by the Alaska Packers Association, in March of 1911, and almost certainly shows her original accomodations. It is extremely likely that this plan also represents the THAYER's original arrangement: all of the evidence which we have gathered points toward this conclusion.

The METHA NELSON plan not only confirms the validity of the cabin reconstruction, but also offers a solution to the problem of the bunk arrangement in the deckhouse "forecastle." When funds are available at some future date to restore the deckhouse to its original dimensions, this plan will again prove valuable.

ALASKA PACKERS ASSOCIATION * SAN FRANCISCO *

Schr. Metha Nelson

Scale 1/8"=1' March 1911



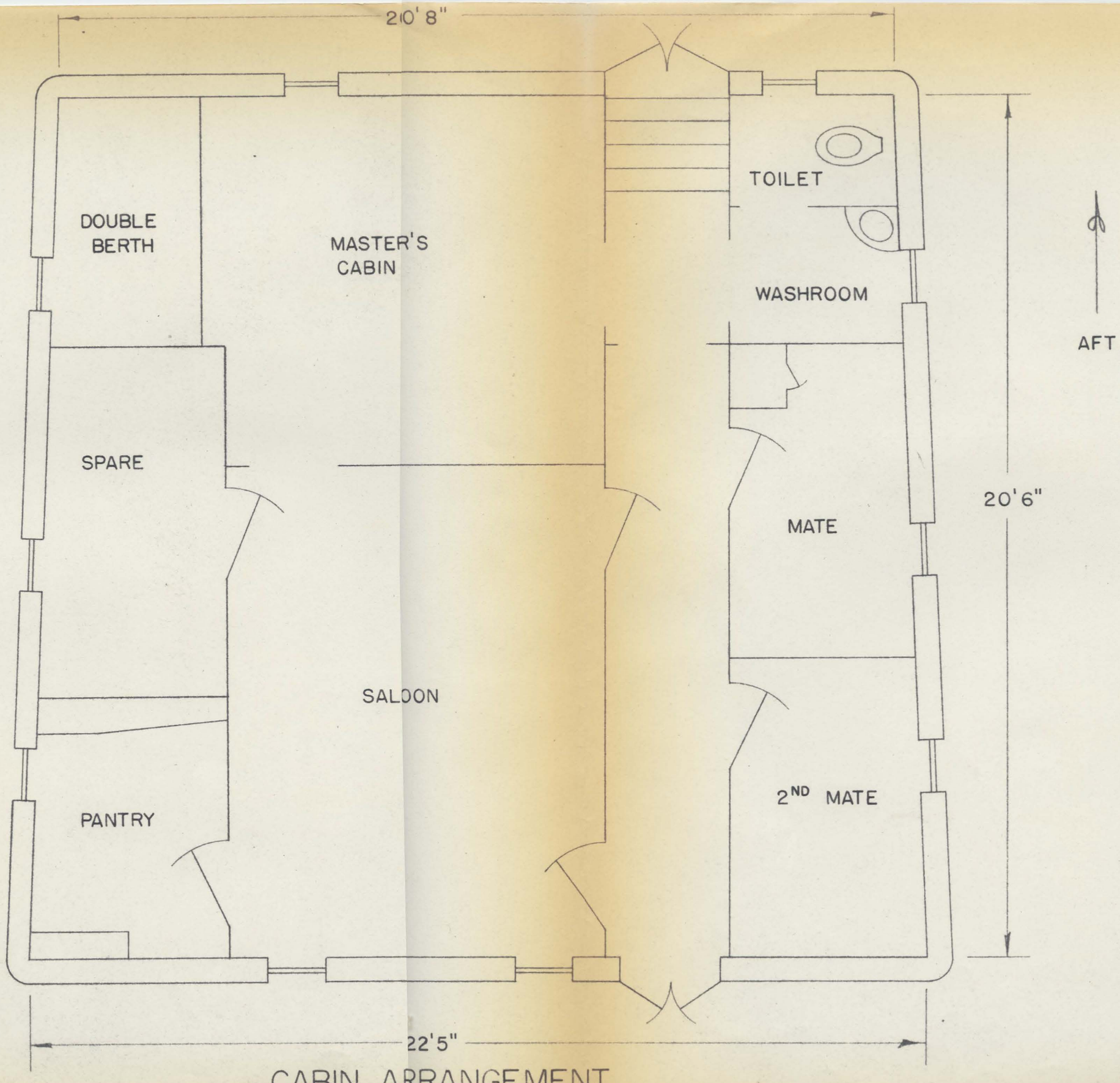
Plan of C. A. THAYER's Cabin

The plan on the following page shows the C. A. THAYER's cabin as restored at this date.

The public will circulate through the hall and saloon, while the pantry and captain's cabin will be the major "displays".

As a result, the saloon will be quite bare, with only the basic table, benches, stove, and hanging lamp; tableware and related accessories can be effectively displayed in the pantry, out of reach of souvenir hunters.

The whole of the master's cabin, which should be elaborately and completely furnished, will be visible through the doorways to the saloon and to the hall.



CABIN ARRANGEMENT

SCHOONER C.A. THAYER

SAN FRANCISCO MARITIME MUSEUM

THAYER CABIN

SCALE: 3/8" = 1 FT | DRN: B. KNAUTH

DATE: MARCH 4, 1960 | TRCD: S. JAXON

Finish

Although plain white was the most common interior finish in West Coast schooner cabins, redwood paneling was sometimes given a "natural" finish, and in rare cases hardwoods and hardwood-veneers appeared. Since a natural hardwood interior was most highly esteemed in ship's cabins, logic alone would lead us to the conclusion that a "grained" finish on softwood would have been reasonably frequent. We have not, however, found any evidence of the use of this process--except in the C. A. THAYER herself.

In the saloon and master's cabin the bottom-most finish, lying underneath numerous layers of white, green, and blue paint, is light oak graining. There is no evidence that this succeeded a natural redwood finish, and there is only a bare possibility that it was applied over an original white finish. The graining appears only on the vertical surfaces, and the overhead was apparently white.

It would appear desirable to restore this finish, for nd only is it most probably the original, but the graining will foster a less antiseptic atmosphere than the ubiquitous white and will be easier to keep clean.

We have had one of the few remaining graining experts inspect the cabin and show us samples of his work; he has estimated the cost of applying the oak graining (over a base coat applied by the owner) to the vertical suraces in the saloon and captain's cabin at $230. We recommend that means be found to employ the services of Peter Licin, 2680 McAllister St., San Francisco, to accomplish this work.

The base coat for the graining is a coat of flat white and semi-gloss white, mixed approximately half-and-half, and toned to a shade approximating that of the finish desired; this applied over a coat of white primer. After the surface is grained, it is varnished.

THE CAPTAIN'S BUNK

May 10, 1960 . . .

The graining process has been completed, and is an entire success, forming a striking contrast with the white overhead.

Curtains at either end of the berth will add a touch which will lighten the comfort-less effect of the white t & g rectangle framing the bunk.

The graining in the C. A. THAYER's cabin appears to have been slightly darker than the chip below identified as "Light Oak", though not so brown as the 'Dark Oak" sample. The original graining was a rather unattractive shade, unskillfully applied: here, as in restoring other details of the vessel, it is probably necessary to check impulses toward an expression of good taste.

Light Oak

Dark Oak

The finish of the remainder of the cabin, and of the overhead in the captain's cabin and saloon, should be semi-gloss white. Mr. Dring has tried some sample patches of this paint, which should be easy to maintain and which avoids the excessive gloss and "freshness" of the modern enamels.

Furnishings

The photographs accompanying this report illustrate the wide variety of furniture and other artifacts that are appropriate to the C. A. THAYER, and we invite attention to these rather than to some inventory of what "should" be in the cabin.

We doe not place great confidence in details we have thus far gathered from former occupants of the THAYER's cabin, beyond accepting the general agreement that there was some kind of desk and sofa in the captain's room and a table and stove in the saloon. And, of course, even a quite accurate inventory of furnishings would tell us comparatively little about the precise appearance of each item.

We are continuing to accumulate recollections of the THAYER's furniture during her lumber-schooner days, but there is little doubt that in the last analysis the cabin must be representative of West Coast lumber schooners to a greater extent than it is a duplicate of the C. A. THAYER's own cabin in, say, 1900.

Our comments on the photographs express our views on the detailed furnishing of the cabin. But in general, we may say that the level of taste reflected in the furnishings should be mediocre with occasional garish touches: the West Coast lumber schooner captain stood much closer in "class" outlook to the saloon-keeper or grocer than to the "professional" man.

SCHOONER BLAKELY

The four-masted schooner BLAKELY was built by Hall Brothers in 1902. In such large vessels the captain had a sitting-room (shown here) and one or more separate bedrooms.

Of particular interest in the THAYER restoration is the Oriental rug and the fancy hanging lamp--and the patent rocking-chair with the silk cushion.

A BENDIXSEN BARKENTINE

The captain's cabin of the barkentine JANE L. STANFORD shows moulding details identical to the C. A. THAYER. The STANFORD was built by Hans Bendixsen, the THAYER's builder, in 1892, and this photograph is filled with appropriate items for the THAYER's cabin.

The desk with the one-piece roll-top and pull-out writing table fits a description of the THAYER's desk which we have received from the daughter of Captain "Gus" Peterson.

Among the books are a four-volume set of The Great Republic by the Master Historians, The People's Common Sense Medical Advisor, Joseph Conrad's Under Western Eyes, The International Code of Signals, Azimuths of the Sun, and a 1918 American Practical Navigator.

The date of the photograph is further established by the patriotic photograph of Woodrow Wilson in the corner of the schooner-picture. A package of "10 Cigarettes 10" lies in an ash tray, and a package of tobacco atop the books.

The lamp on the table would seem a dangerous type to take to sea; the hanging lamp is a minor variation of a standard pattern.

"AT HOME" IN THE COMET

Captain Otto Lembke and his wife Hulda pose in their cabin aboard the three-masted schooner COMET at Santa Barbara in 1905.

The COMET, a schooner similar to the C. A. THAYER, was built by Hall Brothers in 1886, and her master's cabin appears to be of about the same size as the THAYER's.

This photograph conveys very well the feeling of "family life aboard," and the sofa, cushions, gramaphone, mirror, bulkhead lamp, bunk curtains, and rocker are all appropriate to the C. A. THAYER's cabin.

1903

GOLDEN SHORE . . . and Her Portrait

The cabin of the Hall Brothers' four-master GOLDEN SHORE shows a moulding pattern identical to that of the JANE L. STANFORD and C. A. THAYER -- two Bendixsen vessels.

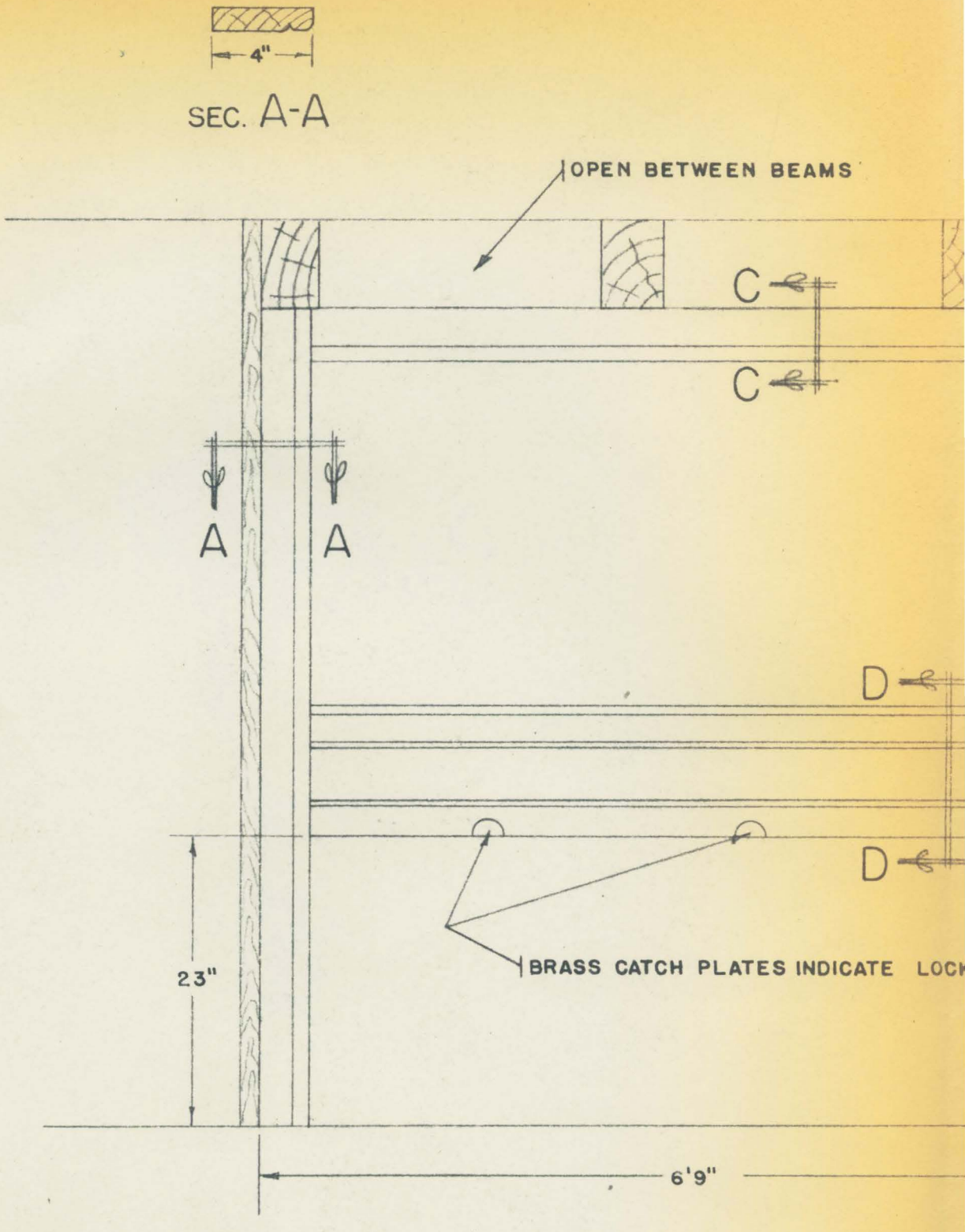
The huge ship portrait is of the vessel herself. Under the framed master's license hangs an aneroid barometer (partially obscured by the horn of the Victrola). At the far left there appears to be a clock, although it might possibly be a second barometer.

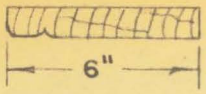
Stateroom Restoration

The first and second mates' rooms, on the port side, and the spare stateroom, to starboard, need not be restored at the present time in order for the cabin to be an entirely adequate display. However, one of the mates' cabins should certainly be fitted out at an early date. The bunk arrangement found in similar quarters in the GALILEE is most appropriate to these cabins, and is shown in the drawing on the following page.

The bunk should be high enough to provide crawl-space underneath to reach the extensive storage area underneath the poop deck outboard of the cabin-trunk. The plan arrangement should be as in the METHA NELSON, but with some kind of locker at one end of the berth.

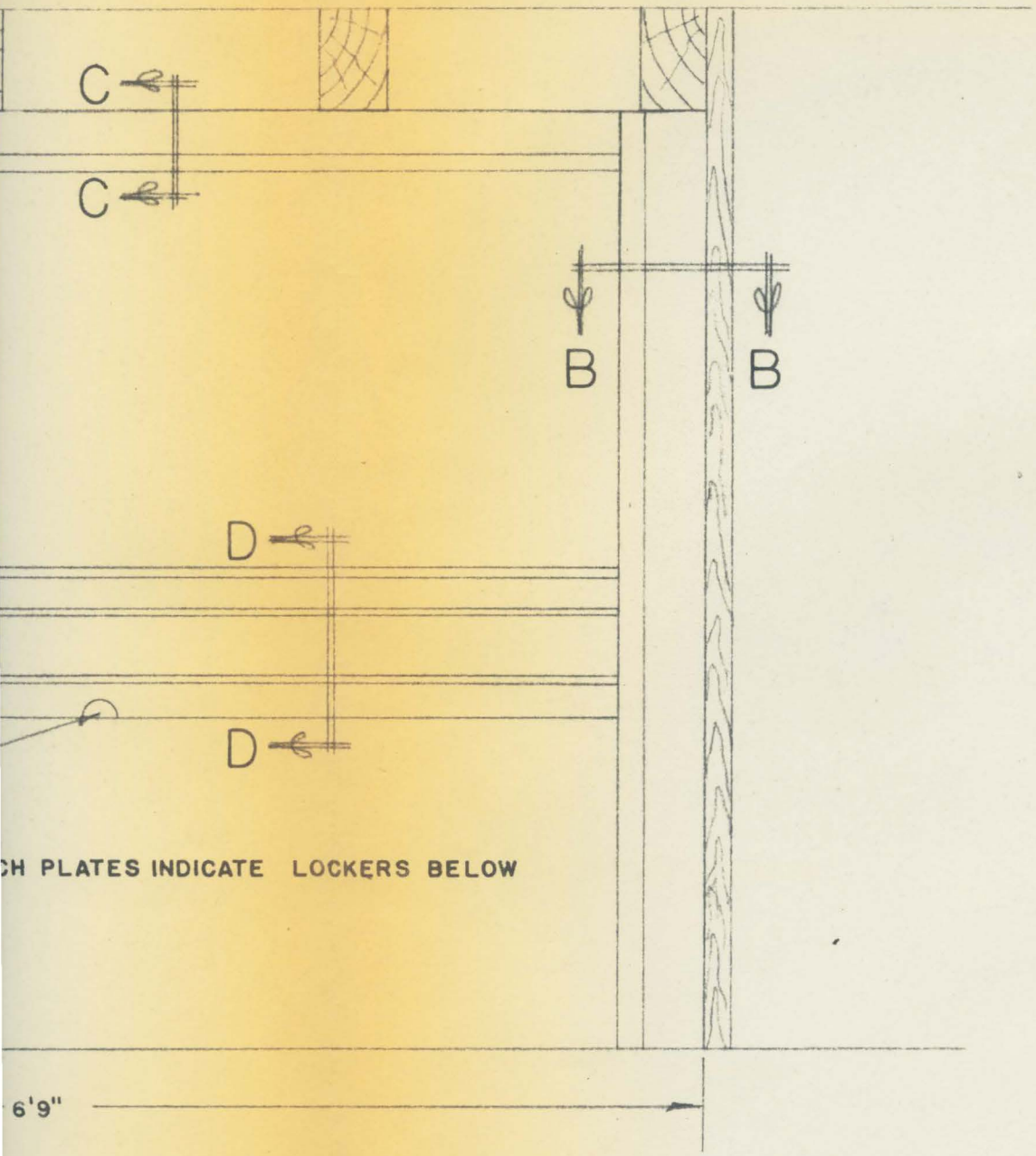
Harry Nelson, a former mate of the THAYER, recalls that the first mate also had a small desk which lifted flush against the wall. This, with a stool or small chair, would complete the basic furnishings of one of these cabins.


4"
SEC. A-A
OPEN BETWEEN BEAMS
C
C
A
A
D
D
23"
BRASS CATCH PLATES INDICATE LOCK
6'9"
AFT

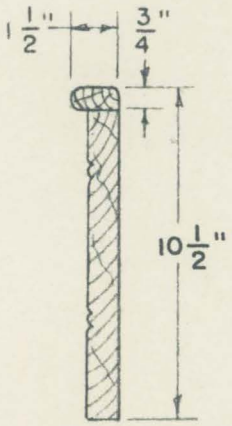


SEC. B-B

ETWEEN BEAMS



SEC. C-C



SEC. D-D

CH PLATES INDICATE LOCKERS BELOW

SAN FRANCISCO MARITIME MUSEUM	
BUNK – SCHOONER GALILEE	
SCALE: 1" = 1 FT	DRN: B. KNAUTH
DATE: 24 FEB 1960	TRCD: S. JAXON
SCALE ON SECTIONS: 2" = 1 FT	

APPENDIX: RESTORATION OF THE C. A. THAYER'S CABIN

General Layout

Captain's Cabin

The Problem of Authenticity

Saloon

Pantry and Bathroom

Doors

Finishing

Plans

Exterior

Work in Progress

Summary of Work Accomplished

20 Oct., 1959

RESTORATION OF THE C. A. THAYER'S CABIN . . . .

The progress of the restoration work in the cabin of the C. A. THAYER has been most gratifying, and it has reached a point where it is possible to visualize the effectiveness of this area as a display when the vessel is opened to the public. The first stage of the work may now be considered completed: the final shape of the cabin is clear, and Mr. Monahan, the accomplished joiner responsible for the majority of the excellent work which has been done during the past few months, has terminated his employment for the remainder of the year. He plans to return to the job after the first of the year, and the project should be substantially completed by spring.

Mr. Dring, Supervisor of the Project, has described the general pace of the work in his weekly reports; decisions as to precisely what changes to make, what restoration to attempt, have been made very much on a day-to-day basis by Mr. Dring, acting under advice from Maritime Museum representatives; at this time it would seem appropriate to take stock of what has been done, the reasons for doing it, and what steps are contemplated in completing this phase of the THAYER's restoration.

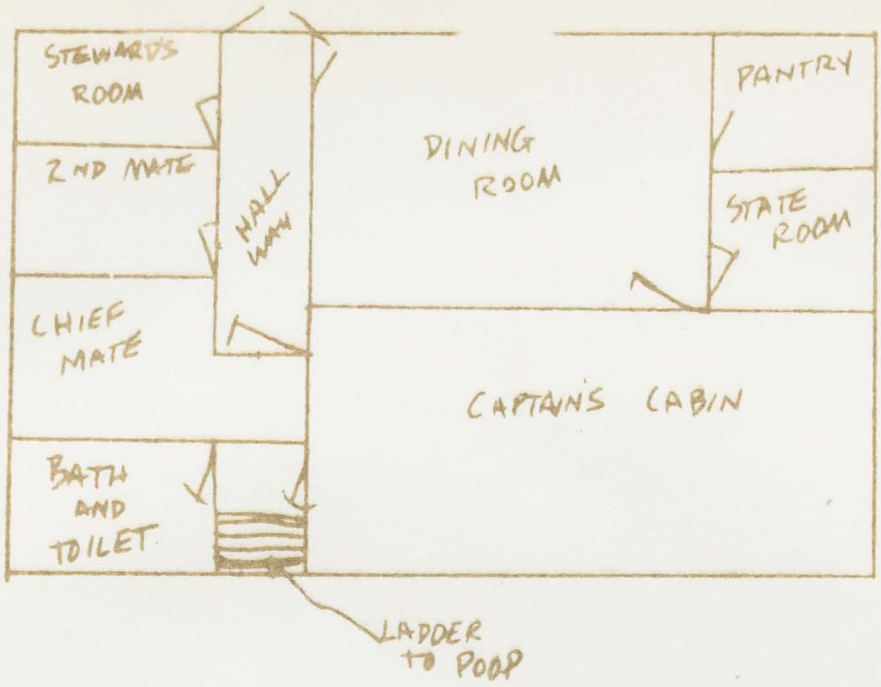
General Layout of the Cabin

The best description of the cabin which we have so far obtained was that given by Ole Lee, former chief mate and later master of the C. A. THAYER, in 1957. It is unfortunate that Captain Lee has since

died, for he could certainly fill in many details of the layout were he able to go aboard the vessel now. Captain Lee commented:

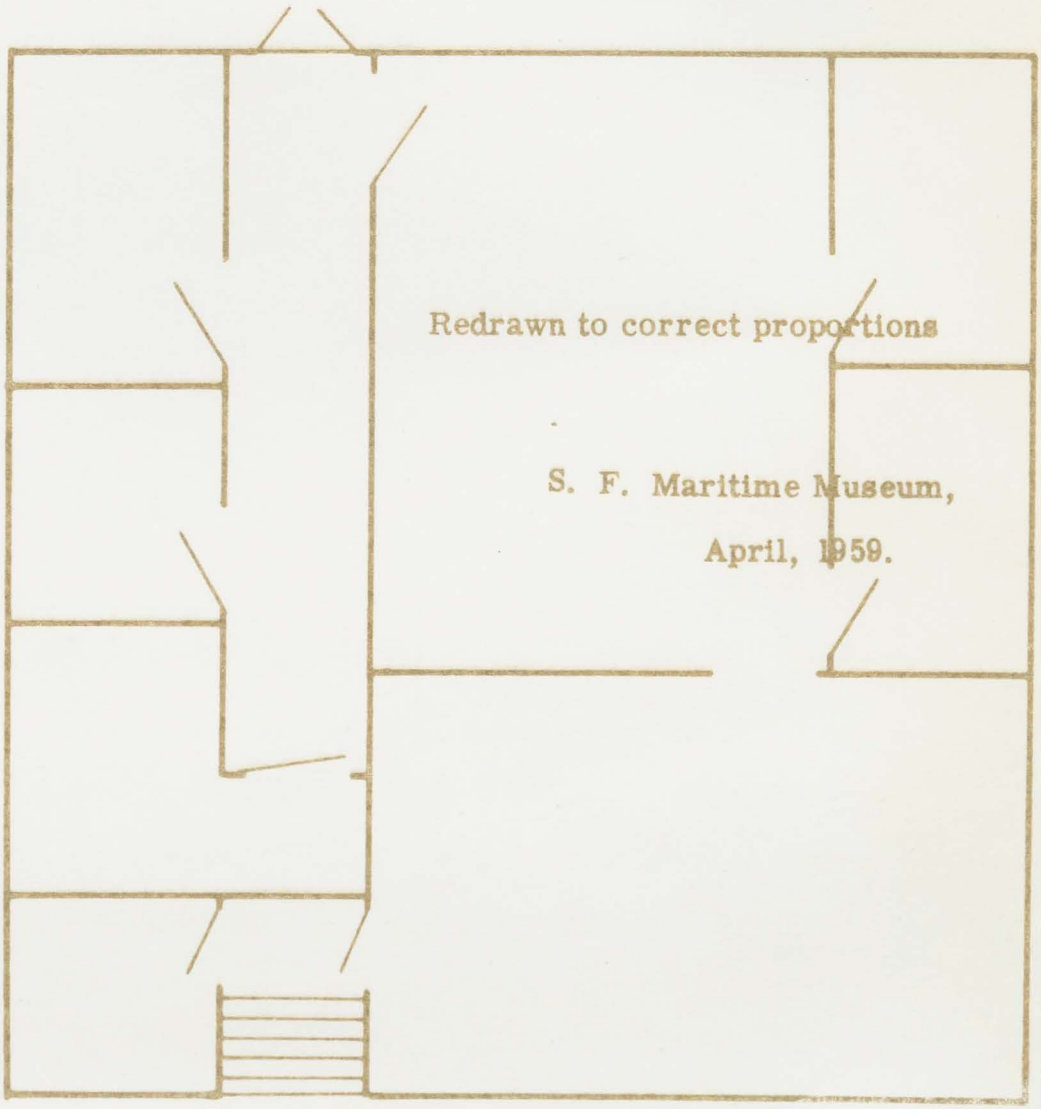
> The following accomodations were in the cabin: On the port side, 3 rooms, first cook and steward, next 2nd mate and Chief mate next to him. The Chief mate's room was the largest as there was a hallway in front of the steward's and 2nd mate's rooms.
>
> The only entrance from the main deck was on the port side of the cabin leading into the hallway; to the left coming into the hall was a door leading into the dining room. This was quite a large room with a table large enough to seat seven men, the chairs were screwed down to the deck. There was a stove for heating purposes.
>
> On the starboard side forward was the pantry, next to a stateroom, with a door leading from the diningroom.
>
> On the starboard side on the after bulkhead in the dining room was a door leading into the captain's cabin. The captain's cabin had a double bunk on the starboard side; there were lockers under the bunk, also a beautiful desk with lockers built over it and on each side. This I believe was built into the vessel when she was built. On the starboard side was a door leading into a small hall where there was a stairway up to the poop deck. Under the stairway was a small door into the lazarette.
>
> On the port side of the hall was a door leading into the toilet and bath. Here was a bath tub, toilet and wash basin with running water supplied by a small tank overhead which was filled from outside on top of the house. A big skylight supplied daylight for the captain's cabin and dining room.

[See drawings on following page]



C.A. THAYER

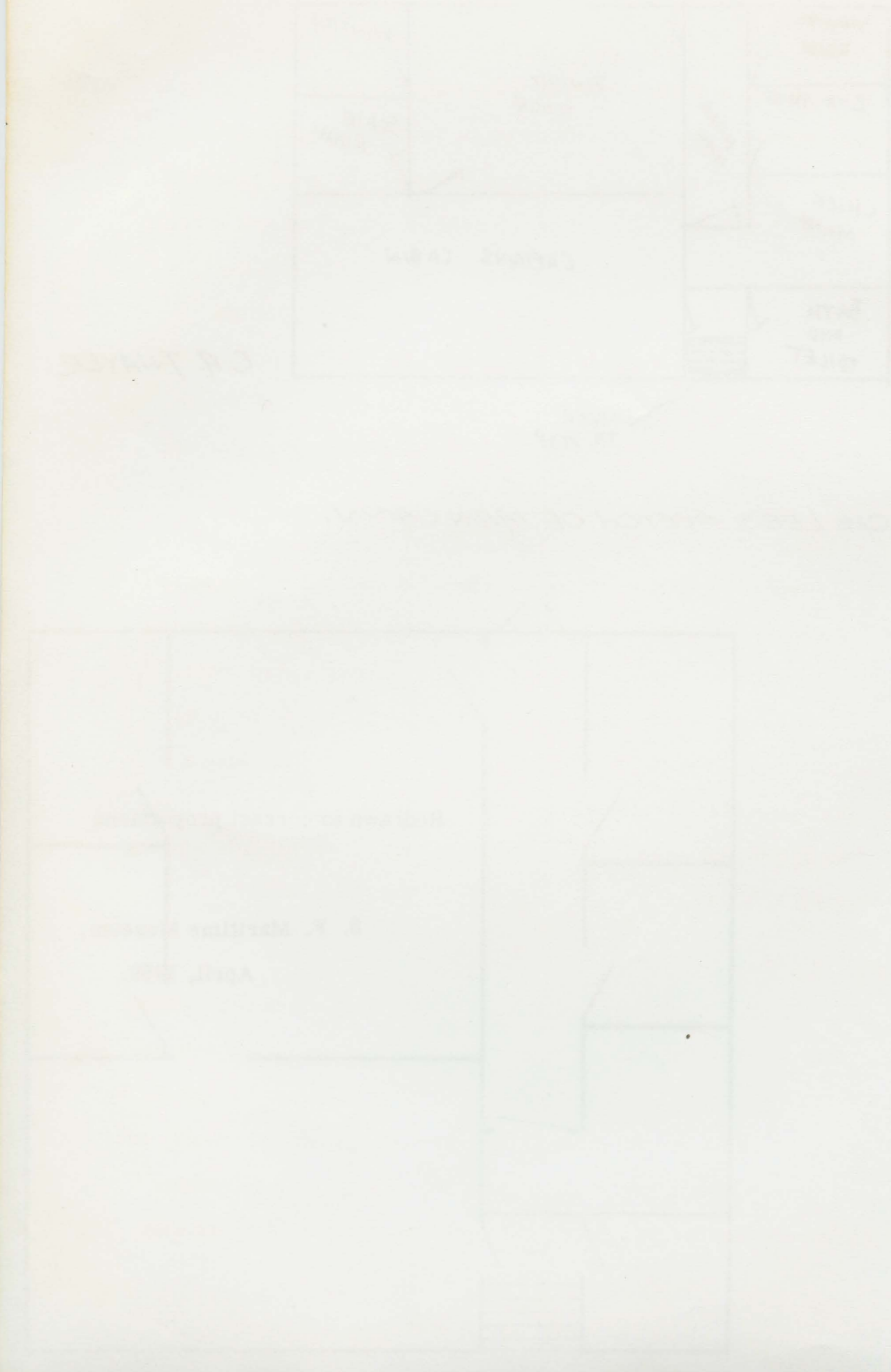
OLE LEE'S SKETCH OF MAIN CABIN.



Redrawn to correct proportions

S. F. Maritime Museum,

April, 1959.



Investigation of the condition of the cabin in April and May of this year revealed that there was no doubt as to the accuracy of Lee's sense of proportion in showing the captain's cabin as much larger than it was then -- the line of the original bulkhead, about two feet forward of the existing bulkhead, could be plainly seen. The line of the bulkhead on the port side of the passageway was also plainly visible.

Lee's recollection was also borne out when the reefer box was torn out, exposing evidences of dish racks in the pantry. However, his location of three cabins and the bathroom along the port side did not seem to work out.

Examination and measurements of the cabin of the AZALEA, a slightly smaller Bendixsen schooner, revealed that she had apparently had a similar arrangement, in which the mate's cabin shut off access to the poop from the cabin except through the skipper's stateroom.

At this point we slacked our efforts to determine the precise arrangement of the port side cabins, as it was clearly impractical from the standpoint of circulating the public through the cabin to consider an arrangement which permitted fore-and-aft travel only through the captain's cabin.

Captain's Cabin.

The captain's cabin is the one area in the ship which will relieve the rather stark utilitarian atmosphere of a coastwise lumber schooner. The THAYER's captains often carried their wives aboard, and the C. A. THAYER, in common with most of the other good-sized schooners, must have at times had a master's cabin crowded with the most elaborate appointments that the pocketbook of the skipper, the taste of his wife,

and the occasionally rude behavior of the sea, would allow.

In the words of Mrs. Peter Nelson:

> "One time there was a storm. The cabin was different then. They have altered it. There was a sofa and a rocking chair, and a kind of bureau -- nice furniture. And they got loose, and come roaring in. An Rudolf says, 'Mama! Don't you cry! I'll dance the klip-klop for you . . ."

Obviously, the public cannot be permitted to enter the refurbished captain's cabin -- or all the nice furniture will "get loose." In particular, there is no way in which all of the little articles which might be found in an inhabited cabin could be displayed adequately in our souvenir-conscious society.

The solution to this problem, submitted in the drawing we gave to Mr. Dring in July, was cut the passageway straight through from the forward end of the house to the poop. This proposal realized the following advantages:

1) It permits the captain's cabin to be screened from the public, yet affords views of the interior through two doorways.

2) Public circulation is about as good as could possibly be hoped for in a ship's cabin: there are two entrances to the saloon, and a straight-through passage to the poop.

3) The arrangement adheres very closely to the original.

The Problem of "Authenticity"

We are now investigating the furnishing of the cabin in detail, through the assembling of photographs of the cabin interiors of West Coast schooners of the period, and through interviews and correspondence with survivors of the era -- and of the C. A. THAYER in particular. A matter of display policy crops up here: Should an attempt be made to duplicate the exact arrangements found in the C. A. THAYER at some

particular moment in the past -- or should she be outfitted in a manner typical to the turn of the century, employing the most effective materials and arrangements which can be employed?

In our opinion, a representation of how the vessel might have appeared is the most desirable approach. Attempt at exact duplication must founder on the rocks of lack of adequately detailed information and the difficulty of obtaining the proper materials. The exigencies of public display have already brought us to a change in the original layout of the cabin -- other alterations will be necessary in the future, both in the THAYER and in the WAPAMA.

Naturally, every departure from the C. A. THAYER's peculiar authenticity must be scrutinized most carefully, working from the premise that something which was originally a part of the ship, particularly during her years as a lumber schooner, has inherent value for that reason alone. Yet in making changes which are desirable for really important considerations of public safety, public instruction, or overriding display value we may allow the severity of our historical judgement to be tempered by the reflection that no ship which is swarming with tourists can possibly be a 100% "real" lumber schooner, and that the THAYER herself has suffered so many changes during her long career that it would be a very difficult problem to even determine which C. A. THAYER we are trying to reproduce.

The answer to those problems involving a conflict between perfect historical accuracy and interests of convenience, safety, costs, and display impact would seem to lie in an appreciation of the difference between historical integrity and preoccupation with some unattainable ideal of literal reincarnation.

Saloon

It is not likely that it will prove desirable to restore all of the spaces in the cabin at present. The captain's cabin and saloon take the first priority, the bath and pantry second, and the three small cabins a poor third. It will most probably prove desirable to leave the three cabins closed off from the public for the present: they can be finished up one at a time in the more distant future.

The public should, of course, be permitted in the saloon. This is necessary to realizing the full display value of the master's cabin: a view through the saloon door as well as the passage door permits inspection of the entire cabin. The saloon will have little in the way of fixtures: a stove at the forward end; and a table in the center, with suitable seats.

The dining arrangement mentioned by Captain Lee, "A table large enough to seat seven men, the chairs . . screwed down on the deck," might crowd the saloon too much for convenient display to the public. It also sounds a little large for a schooner which would carry no more than four or five in the "afterguard," and therefore may not have been the original installation. We hope to get some definitive information from Mrs. F. G. Scott, widow of one of the THAYER's earlier masters, on the arrangement of the saloon (and cabin) during the vessel's lumber schooner days, before arriving at a final recommendation.

Pantry and Bathroom

The pantry should make a very good display. The idea of a double ("Dutch") door arrangement, which would keep the public at bay while permitting the the visitor to lean right into the pantry seems a very good one. A little further research on the original layout would be in order,

however, before adopting this arrangement.

The bathroom will also be an interesting display, requiring little in the way of installation. A sink recessed into a top, extending the whole length of the washroom niche, (such as that which may be still seen in the BEULAH) will be good-looking and easy to install. We are presently trying to determine what sort of toilet should be placed in the after section of the bathroom (that part occupied by the shower until recently.).

Doors

The moving of bulkheads and restoration of the cabin has made most of the existing doors of questionable utility. The door to the bathroom is of an appropriate pattern for the passageway and should be left in place, hooked back against the bulkhead. The door to the forward port side cabin can be refitted, and matches the bathroom door; a new door of the same pattern will have to be made for the center port side cabin.

The outside face of the door at the forward end of the saloon should naturally be refaced to match the other doors in the passage. The after door to the saloon poses a problem: it cannot be hung so that it swings into the saloon, as the moulding prevents it from folding flush against the bulkhead; if it swings into the passage it will fold against the bulkheads, but in the narrow passageway the protruding door knob will prove a threat to the public's clothing. It would be best to proceed on the initial assumption that this door, as well as the two doors to the captain's cabin, are best left off.

Finishing

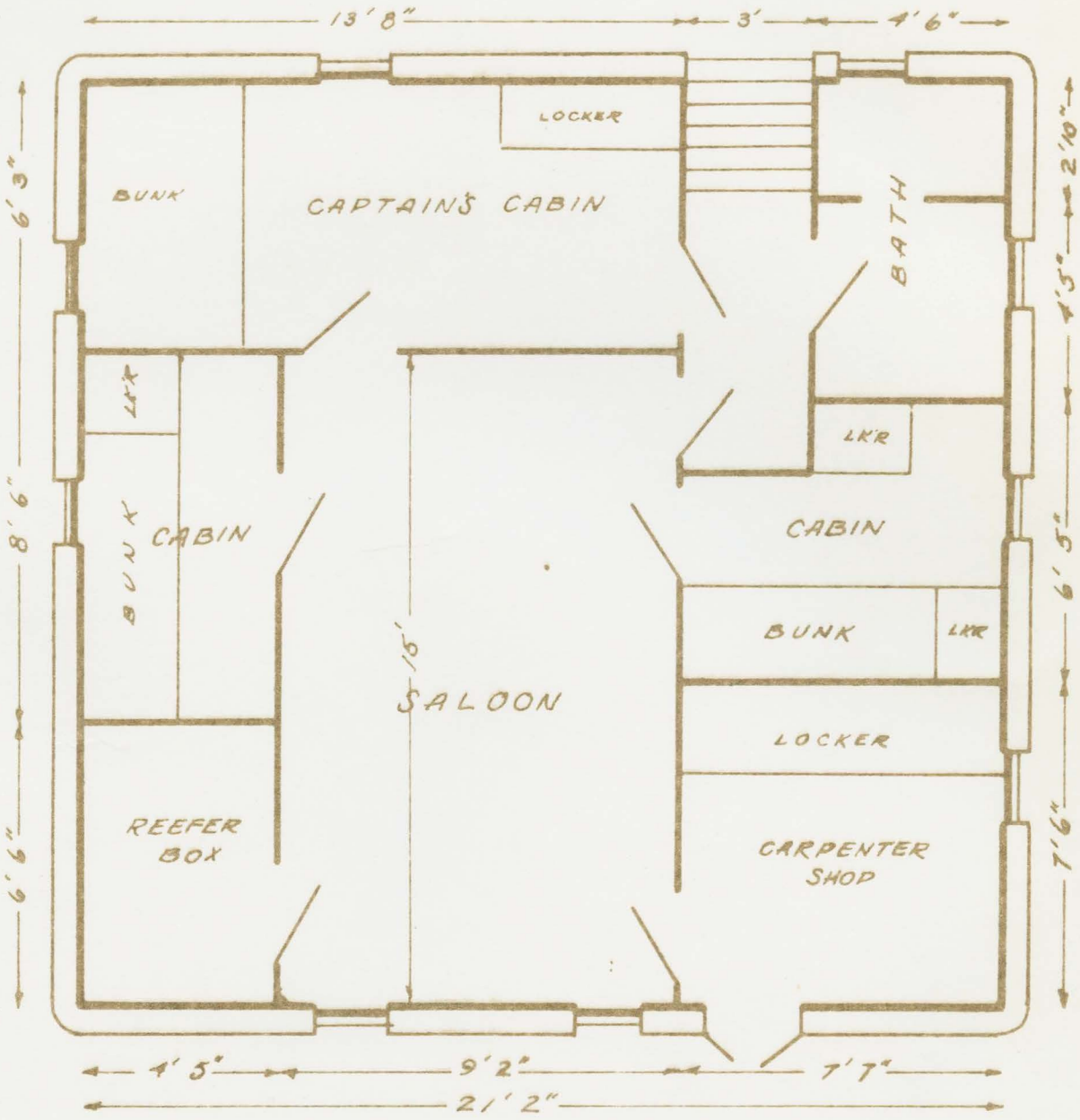
Underneath the layers of paint on the old panelling in the cabin there is evidence that the original finish was "grained." Later, the cabin was painted white, and it has apparently been that color during most of the schooner's career. The condition of the surfaces after mouldings have been replaced and the existing paint removed will probably determine the finish that is finally applied.

Originally, the cabin panelling, as well as the tongue and groove bulkheads, were all redwood, but fir has generally been employed as a replacement material. The advice of a real expert in this old-time technique will be sought as soon as the paint removal and joiner-work has proceeded to a point where the final condition of the interior may be determined. Cost may also prove an important factor by the time the job has progressed to the point where finishing is the primary concern.

At all events, white, with a little gold trim in the mouldings, is a traditional and attractive finish, and may be employed without fear of censure.

Plans

Following is a plan of the cabin as it appeared before restoration work commenced, together with the proposed layout submitted to Mr. Dring in July. The latter is here reproduced with minor changes worked out by Mr. Dring and Maritime Museum representatives since July.

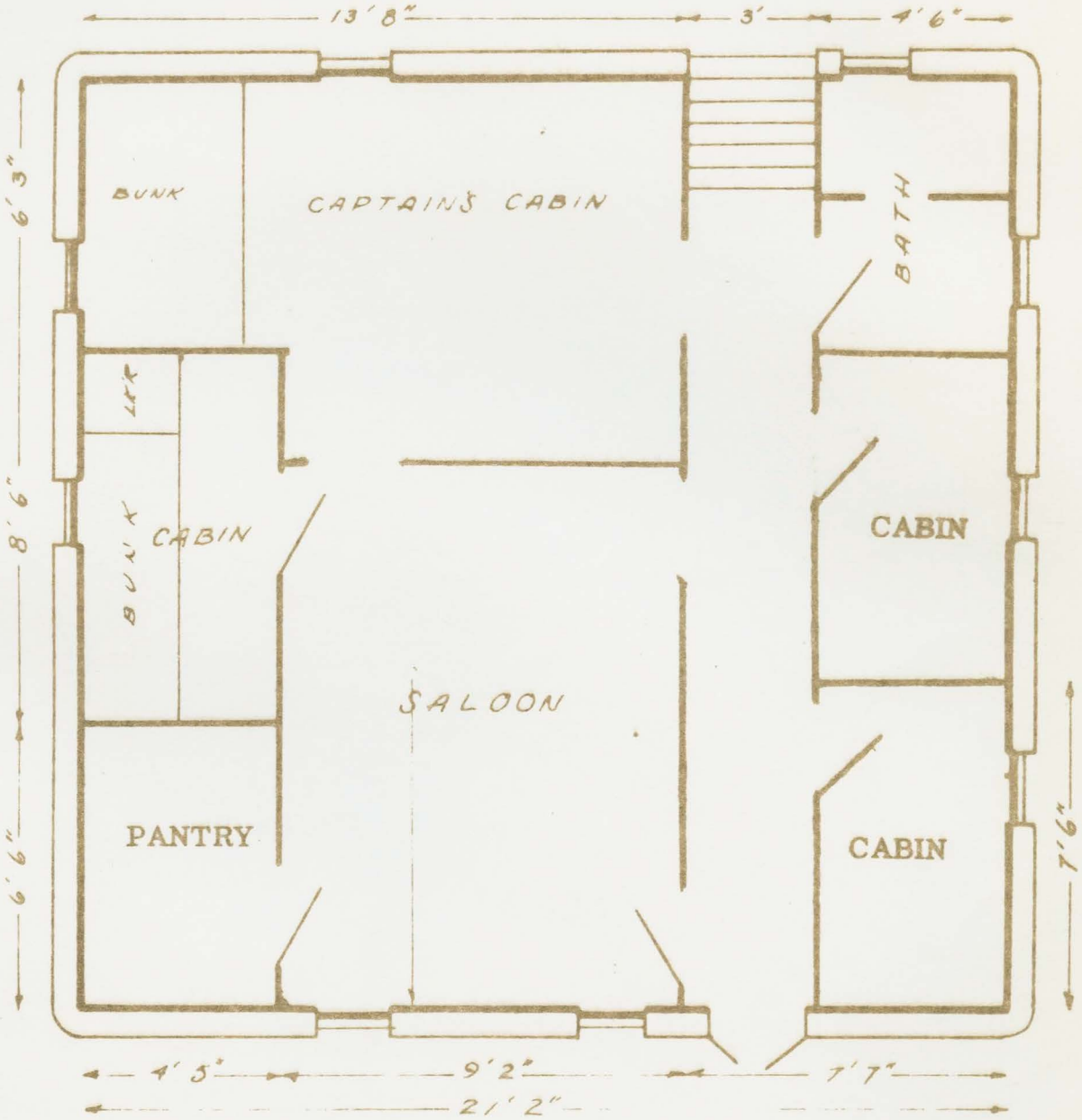


Sch. C. A. THAYER

PRESENT ARRANGEMENT OF MAIN CABIN

SCALE 1/4" = 1'

APRIL 1959



Sch. C. A. THAYER

PROPOSED ARRANGEMENT OF MAIN CABIN

SCALE 1/4" = 1'

JULY, 1959

Exterior

The decking comprising the starboard forward side of the cabin roof was found to be thoroughly rotten, and its removal and replacement was necessary in order to get a water-tight top to the house. The heavy beams and margin-piece, as well as the thick forward bulkhead of the cabin, were also found to be in an advanced state of deterioration, particularly in the way of the old reefer-box. Unfortunately, the deterioration was so extensive that entire removal of the rot was impractical, but the reconstruction may be considered a success and it will be many years before more thorough work need be attempted.

The major portion of the decking of the cabin top was found to be in good condition. Investigation of the treatment of the cabin top in the coastal lumber schooners revealed that a great many of these vessels had the seams payed with white compound, and that the decking was oiled. As this process would be the most attractive, it has been adopted, and when the poop area finally reaches display condition it should present an impressively "shipshape" appearance.

Work in Progress

The ultimate impact of the C. A. THAYER's cabin as a display will be the result of the cumulative effect of a mass of details: the excellent reconstruction effort will not "carry" the cabin by itself, and considerable remains to be done in planning 1) furnishings, 2) interpretive technique, and 3) lighting. In comparison with major rebuilding jobs this comparatively superficial work requires research and planning which often seems entirely out of proportion to the size of the task.

One does not have to look far about him to find essentially interesting and worthwhile exhibits which are "flat" (if not outright spoiled) because of inferior interpretation and inadequate attention to the details of presentation. In the last analysis, it is the garnishing which is apt to determine the character of the dish -- and we propose that Hollandaise is worth the effort, even though we can buy mayonnaise in jars.

Summary of work accomplished since May, 1959

Companionway doors rebuilt.

Hatch to hold decked over.

Bathroom bulkhead removed to original position.

Bulkhead to master's cabin removed to original location.

Tongue and groove bulkheads on both sides of passageway repaired, renewed or installed.

Reefer box removed.

Mouldings, grille-vents, replaced where necessary.

Mouldings and panelling in saloon replaced to original position.

Paint removal well underway.

Forward part of roof decking on starboard side replaced; new beams and margin piece scarfed in as necessary.

Cabin roof entirely recaulked.

Sliding port covers rebuilt.

HOISTING AND PUMPING MACHINERY

MEMORANDUM on Hoisting and Pumping Machinery

[Submitted separately 16 November 1960]

The West Coast Marine Donkey Engine . . . . Afloat and Ashore.

Hoisting and Pumping Machinery, Schooner C. A. THAYER

1. The schooner C. A. THAYER was essentially designed for the coastwise trade -- the carrying of lumber from Northern California and Pacific Northwest ports to California. This implied short voyages (an example is four days from Grays Harbor to San Francisco with a full lumber cargo in 1906) and proportionately greater time spent in port than would be the case with a deepwater vessel.

2. The days in port were spent loading and discharging cargo. This was done with the hoisting, or "donkey engine". This engine was the heart of the cargo handling operation, as important in port as the masts and sails were at sea. Upon arrival the schooner furled her sails -- the mechanism that entrapped the winds became inert and the steam engine in the forward deckhouse came to life.

3. For the foregoing reasons the donkey engine and boiler, and the donkey room with its appurtenances becomes one of the most important display rooms in the ship. As the attached letter from Captain Fred Klebingat points out: "I have to laugh at Felix Reisenberg's "A Smudgy Donkey Engine!" Most all donkeymen I knew took great pride in the engine and the donkey room, and as they were daymen in some ships they had all kinds of time to shine her up and do fancy painting after they had trimmed the sidelights and lamps in the fo'c'sle."

A SHIP'S DONKEY ENGINE . . .

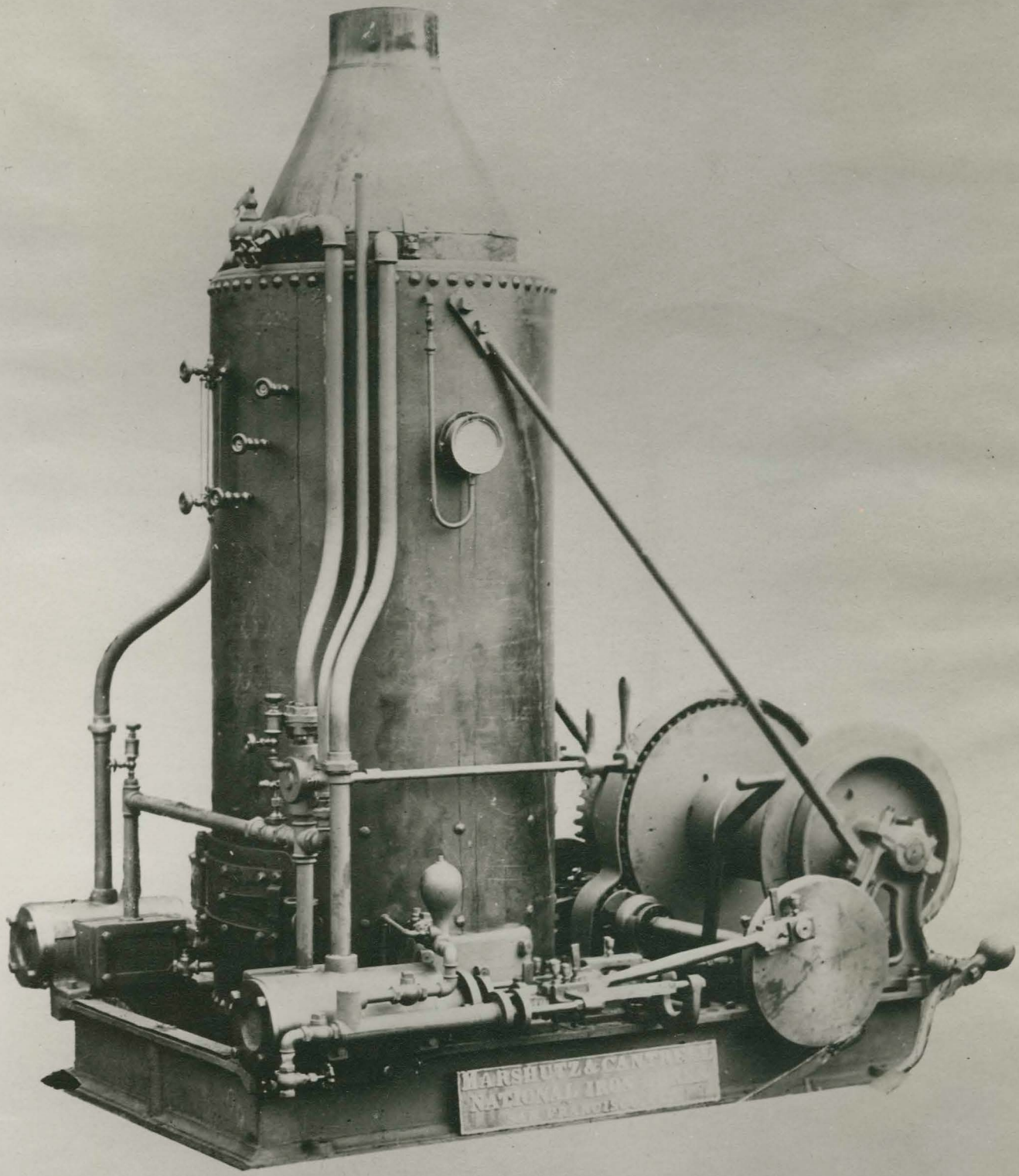
This donkey engine and boiler, made by Moore & Scott Iron Works, of San Francisco, was typical of the marine installation around 1900.

This donkey was made in several sizes, and a similar model, with wheels attached to the bed, was available (either two-cylinder or "one-legged") for stevedores.

The smallest single-sylinder stevedore's donkey had an upright cylinder. Logger's donkey engines were generally similar to the ship's donkey pictured, but had a different drum arrangement.

35. SHIP'S DONKEY

MOORE & SCOTT IRON WORKS, SAN FRAN



4. The Historic Ships Restoration Project is fortunate in having as Supervisor the last American donkeyman to round Cape Horn with his donkey engine. From personal observation while drying out a spare pair of shoes in his warm demesne , those many years ago, I can say that he is well acquainted with the principles of upkeep outlined by Captain Klebingat.

5. The usual donkey engine installed on Pacific Coast built sailing ships was manufactured by Murray Brothers, and for some time we have been advocating that the last known existing Murray Bros. donkey engine, in possession of the Maritime Museum, be installed in the C. A. THAYER. This engine was fitted in the midship house of the ship BALCLUTHA presumably about 1899 when she came under Pacific Coast ownership and entered the export lumber trade. It was removed in 1954 as not being part of the original equipment of the Scots-built BALCLUTHA.

6. Supervisor Dring has not favored this Murray Bros. engine, contending that while it is the proper type and of the same manufacture as the one he was shipmates with in the bark KAIULANI, it is somewhat outsize for the C. A. THAYER. He favored an investigation of a smaller donkey engine which for many years has been affixed to the forward end of the deckhouse roof of the old three masted schooner BEULAH, slowly sinking into the mud at Sausalito. The BEULAH, a topmast schooner of 357gross tons, was built by Dickie Bros. at San Francisco in 1882 for J. Knowland. She is a vessel 100 tons smaller than the C. A. THAYER.

7. To resolve this matter Supervisor Dring and myself paid a visit to the remains of the BEULAH on Wednesday of this week. The engine (and the schooner itself) is owned by Don Arques who operates a boatyard in which old ship parts -- scrap elsewhere -- have a certain sanctity. Mr. Arques is favorably disposed towards the Maritime Museum, however, and towards the Historic Ships restoration program. In the past he has supplied such rarities as a Liverpool poop deck capstan for the BALCLUTHA, the steering wheel for the C. A. THAYER (removed from the Bendixsen schooner AZALEA, grounded in his yard astern of the BEULAH), the patent sheet horse used for C. A. THAYER's mainsail coming down the coast (removed from BEULAH), and the two wooden water tanks from the same Knowland schooner.

8. There seemed a reasonable possibility that the small donkey engine on top of the BEULAH house was once located in the deckhouse as a regular hoisting engine for lumber cargoes. If so, it would be a candidate for the C. A. THAYER. It varies in design from the Murray Bros. and Moore & Scott ship hoisting engines in that the boiler is detached from the frame. This makes for a smaller unit, which would be an advantage aboard the C. A. THAYER. The boiler could be located anywhere in the deckhouse and be connected by lagged piping.

9. Subsequent research shows that a separate engine and boiler are enough of a possibility that we concur with Mr. Dring and recommend the acquiring of this engine for display in the C. A. THAYER. The

Hyde Windlass Co. catalogue of 1915 shows a very similar engine "designed for shipboard for working the windlass, pumps, hoisting cargoes and hauling the vessel". An old photograph in our files shows the BEULAH in her lumber carrying days with the funnel from the boiler (and presumably the boiler itself) located in the port forward corner of the deckhouse. This supports the theory of a small detached engine.

10. It is Mr. Dring's belief that, with luck, this engine could be made to operate again. This would make a very "alive" kind of display as occasionally it would be fired up for ship's work. A new boiler would have to be secured. The C. A. THAYER originally had a square wooden trunk for the donkey boiler extending through the top of the deckhouse and so located that it is evident the boiler was in normal position, directly abaft the hoisting engine.

11. The securing of a boiler and final fixed installation of the donkey engine should await the rebuilding of the C. A. THAYER deckhouse. The present deckhouse is of the wrong length, incorrect architecture, and is of comparatively recent construction.

12. In such time as the engine and boiler are installed and made working, a vertical shaft should be installed to port with bevel gear drive from the principal hoisting engine shaft. This shaft should extend through the top of the deckhouse and operate an

athwartship shaft, the connection again being formed by bevel gears.

At either end of this athwartship shaft is located a gypsy head. The shaft is enclosed with a long, white painted wooden box extending its full length.

13. Outboard of the bevel gear on this athwartship shaft is located a sprocket for the chain drive leading forward to operate the anchor windlass. Suitable fittings for this chain transmission, consisting of heavy castings with idlers, can be provided from BALCLUTHA. Dimensions for shafting, bearing blocks, donkey boiler trunk, etc. will be researched and supplied by the Maritime Museum when required.

14. The BEULAH also has presently installed a steam operated pump called colloquially a "doctor". This is an unusual antique these days, stands an excellent chance of being made operable again, and should be secured.

15. A fresh water tank of rivetted construction is another fixture of the BEULAH's donkey room that should be secured, together with its wooden chocks and supporting iron straps, for inclusion in a rebuilt deckhouse aboard C. A. THAYER.

16. There is good reason to believe that Don Arques would sell these various pieces of equipment at reasonable price (along with certain less important schooner fittings from the nearby AZALEA) and their

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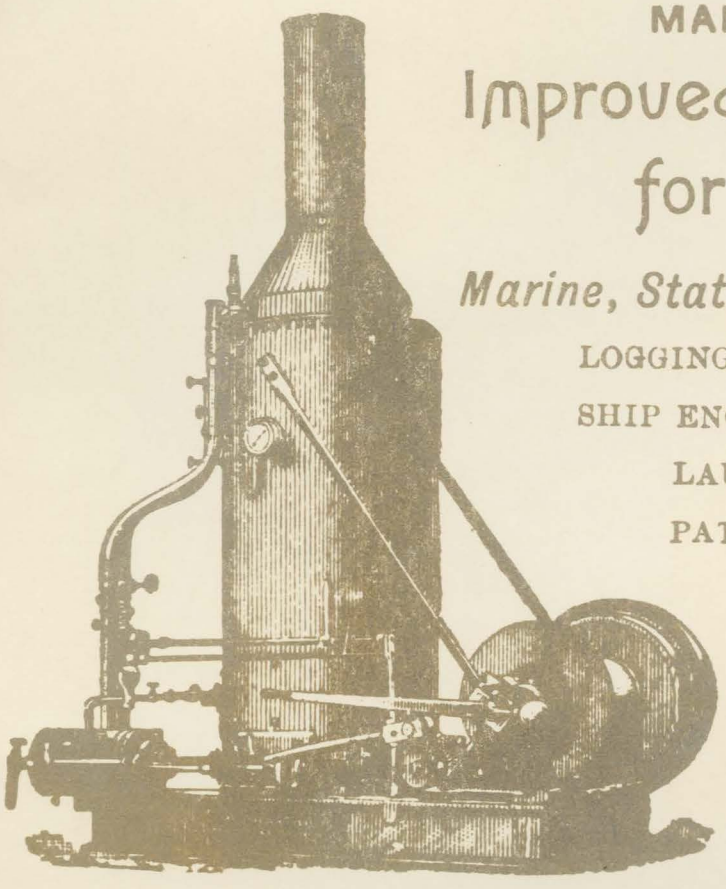

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purchase is recommended. If requested, the Maritime Museum will arrange for their removal and transport to the Oakland Dock & Warehouse Company.

Karl Kortum

THE WEST COAST MARINE DONKEY ENGINE . . . . . AFLOAT AND ASHORE.

From a letter of Capt. Fred Klebingat, former master of the four mast schooner MELROSE, dated Dec. 15, 1955.

Dear Mr. Kortum:

Some time ago I told you that I was going to write a letter about deck machinery. So I start with donkey engines as they were used on the Pacific Coast. Without doubt you are familiar with a Murray donkey, which was most likely the equipment on the KAIULANI and the BALCLUTHA, but there were others. Besides the Murray donkey engine I have been shipmate with engines manufactured or built by both National Iron Works and Golden State & Miners Iron Works but of all of them I believe Murray Brothers engines to be the best.

Seemingly, in the beginning these donkey engines were fitted only with one cylinder, with a flywheel on the side opposite to the driver helping it over dead center. None of them had reverse gear. To make them back up you had to bar them over with a load. Lowering was done by opening a little throttle-like affair next to the throttle, which would let the steam bypassing into the cylinder escape, and the engine would reverse and lower the load. A vertical boiler was mounted direct on the engine frame. It was a firetube boiler, firing mostly wood (that is, in lumber schooners) but around San Francisco coal was mostly used. Water feed was through a steam injector, of which the "Metropolitan" was the most popular, but another by Penberth was also widely used.

The hoisting drum was originally connected to the engine with a clutch, but later on the drum was connected to the engine by a friction. Some had a screw device which pressed the drum against the drive wheel, but Murray Brothers had two brass gears which operated an eccentric which again brought pressure on a pin, which pressed or forced the drum against the wooden friction mounted on the wheeldrive.

Donkey engines with one cylinder were used mostly by the stevedores and were called "one-legged" donkeys. They were really fast, but were little used on lumber schooners as the load took some manipulating at times to get it out of the hold, and a one-legged affair would stop at dead center. But there were several vessels to my knowledge that had this primitive rig -- such as the R. P. RITHET and the J. M. GRIFFITH. In the case of the R. P. RITHET, sugar was the main cargo, and speed was desired, so the cargo drum was enlarged by a wooden jacket which was again covered by sheet iron.

As to the donkies used by stevedores, most of them were mounted on four wheels. There were some which were mounted on scows, and one of them, to my knowledge, had the engine connected to a propeller. How it passed the U. S. Steamboat Inspectors I do not know, but probably the donkeyman held also a Master's license with a San Francisco Bay Pilot endorsement.

Now, as to West Coast lumber-carrying sailing ships, they all had two cylinder donkeys and, as I said, most of us preferred Murray Brothers gear. The driver's stand was always on the port side. On the side opposite the driver a bevelled gear could be engaged to shafting leading to the top of the house, which drove gypsy heads. This again could be connected to a messenger chain leading to the forward

capstan, which drove the windlass. The chain was engaged to a horizontal messenger wheel below the capstan proper. There were but few schooners on the coast that had a windlass driven by steam direct. I only know of two: the five topmast schooner GEORGE E. BILLINGS and the brigantine GENEVA. The steam windlass on the GENEVA was a pretty affair.

The GEORGE E. BILLINGS was the only schooner I knew that had two drums mounted on the donkey, so that two falls could be used while loading over the stern or through the bow ports. For this type of loading an electric bell was mounted on the donkey room to signal the donkeyman; otherwise a hand operated bell was used to pass on signals as to when to go ahead or stop.

Most schooners had also a double acting steam pump, which was helped over center with a fly wheel. They were hooked up to about a 2-1/2 inch suction. A few donkeys also had a condenser to recover the feed water, which was a good thing on the west coast of South America, where water was expensive. But I also knew places in Hawaii (in Mahukona for instance) where water cost a nickel a gallon. Most all donkeys had a groove on the crank disk which was there to hook up a rope messenger to the grooved flywheels of the bilge pumps -- a handy thing to have in case of a bad leak.

The ship's donkeyman was generally an A. B. who was paid $5. 00 per month in addition to his regular wages. For this he had to make up steam in the morning to be ready to turn to, and also blow tubes at intervals, which if he burned wood were not so very often. I have to laugh at Felix Reisenberg's "A Smudgy Donkey Engine!" Most all donkeymen I knew took great pride in the engine and the donkeyroom,

and as they were daymen in some ships they had all kinds of time to shine her up and do fancy painting after they had trimmed the sidelights and lamps in the fo'c'sle. The most beautiful donkey I ever saw was in the topmast schooner ALICE COOKE. Captain Penhallow was skipper. But then Lewers & Cooke of Honolulu took great pride in their ships. The Lord help that sailor who used a pinchbar in the hold to pry a 2 x 4 into place; he was fired forthwith. "Take your time, stow your lumber right, don't bust it up", they were told. "Do it right, but no pinchbar." You may call their skippers also Little Lords. It was they who paid for the cargo when the ship was loaded; they just pulled out their checkbook.

Gasoline hoists were never very popular. I only know of two vessels: one was the three mast schooner OREGON, and the other, the W. H. MARSTON, had a gasoline winch besides the regular donkey. Of course there were quite a few about on Bay scows, but those hay scows which did not have one used mostly a horse to discharge the bales. There was also what you might call a steamschooner -- it really was a gas schooner, the WASHCALORE -- which had gas winch arrangements. Looking back, there was no better, faster, and more reliable cargo gear anywhere as used in Pacific Coast owned vessels.

European ships again had gear again which was not so good but it used to lighten labor. The boiler generally stood in a corner of the donkeyroom; it used salt water for feed. Firetubes would not last very long under such treatment, so they were very simple. From the firebox a straight uptake went through the middle of the boiler. I should judge it must have been about 8 inches in diameter. Through the firebox itself two water tubes about 6 inches in diameter were

fitted at right angles to each other giving a little more heating surface. How we managed to keep up steam I do not know, but we did. Of course, a boiler of this kind was handy; if the ship was fitted with a distilling device, as we had on the four masted bark ANNA.

Now, as to the winch -- it was the same as used on all steamers of that period, fitted with reverse gear and two drums. The shaft of one of them extended through the sides of the donkey house, and was fitted with gipsy heads on either side. Many bigger ships and especially French vessels had several winches mounted on deck, and had two vertical boilers of the type I mention. The German five mast full-rigger PREUSSEN had two Scotch boilers, and she carried a licensed engineer. German deepwater sailing ships preferred internal combustion motors in my time. I think they burned kerosene. The make of one I remember was "Gnome". In order to hoist anchor they fitted the forward capstan instead of the capstan bars with crutch-like affairs, around which they wrapped several turns of a strop which led to the Gipsy of the motor winch with a man standing by near the capstan with a mallet to knock down the turn as they started riding on the crutches (as you could not surge it). Harold Huycke has a photo of the rig he took on the MAIPO.

I remember a Dutch bark called the EMANUEL which bought one of our donkeys while loading lumber up north. But seemingly they did not watch the stevedores, how they loaded the lumber, etc. They could not get the long stuff out of the hatch, so they took off one part of the hatch combing by cutting the rivets. She did not last very long after that -- loading nickle ore in New Caledonia she went on the reef. She was a real old home -- there was not coffee some time, but coffee all the time.

There were other European ships which had a donkey mounted on four wheels which could be shifted from hatch to hatch, which certainly was easier than operating those Armstrong Patent winches that I talked about. The first ship I was on was fitted with one, a donkey with wheels, on a voyage after I left.

Now, as to windlasses, I never saw another make on a lumber schooner than Hyde, built by Hyde Windlass Company in Bath, Maine. It had screw compressors. The bearings which held the mainshaft were fitted to the wooden windlass bitts, and the steel pawls onto the pawl bitt which held the tennon of the bowsprit on the fore part. The brakes were extended to the fo'c'sle head and operated by levers which again held the tension on the brake by tricing the end of the lever down to an eyebolt fitted to the deck.

The steering gear of the double worm pattern was also furnished by Hyde. It always had an iron steering wheel with one exception that I noted. That was on the four mast baldheader GAMBLE. It had been struck by lightning which magnetized the wheel, so that it affected the compass.

In later years as schooners became older, most of them were fitted with a gas engine to do the pumping and they were again hooked up to a pair of gipsies so as to be able to hoist sail with same. Some schooners used Frisco Standards and others Union Gas engines. But Fairbanks Morse engines were often used too, as they were cheap, strong and reliable. This was the Fairbanks Morse "Z" engine.

In later years, schooners went over to double cargo booms and winches; in other words steam schooner gear. But as I am not familiar with the FOREST PRIDE and the COMMODORE, I will let someone else describe that.

C. A. THAYER RESTORATION DETAILS

[Submitted separately
5 February 1960]

Deckhouse Restoration
Details

Display of Dories

Main Hatch

Forestaysail Club Bitt

DECKHOUSE RESTORATION DETAILS

Sliding Doors, After end of Deckhouse

The C. A. THAYER was originally equipped with two doors fitted in wooden slides top and bottom and spanning almost the entire width of the after end of the deckhouse. A large door was located to starboard; a smaller door to port. Dimensions scaled off old photographs indicate that the large door was 54" and the smaller door 27". These dimensions and details of their paneling have been supplied by Mr. Dring. The purpose of the large door was to cover the large opening amidships in way of the donkey engine to allow egress for the hoisting fall and vision for the donkeyman at the hoisting engine controls, while the purpose of the smaller door was to increase this central opening even more, and also to provide a wicket for access to the donkeyroom when the engine was inoperative and the main door closed.

These doors and their slides should be so constructed as to be removable for application to the replacement deckhouse (a house of proper size and construction) in such time as this authentic deckhouse is reproduced.

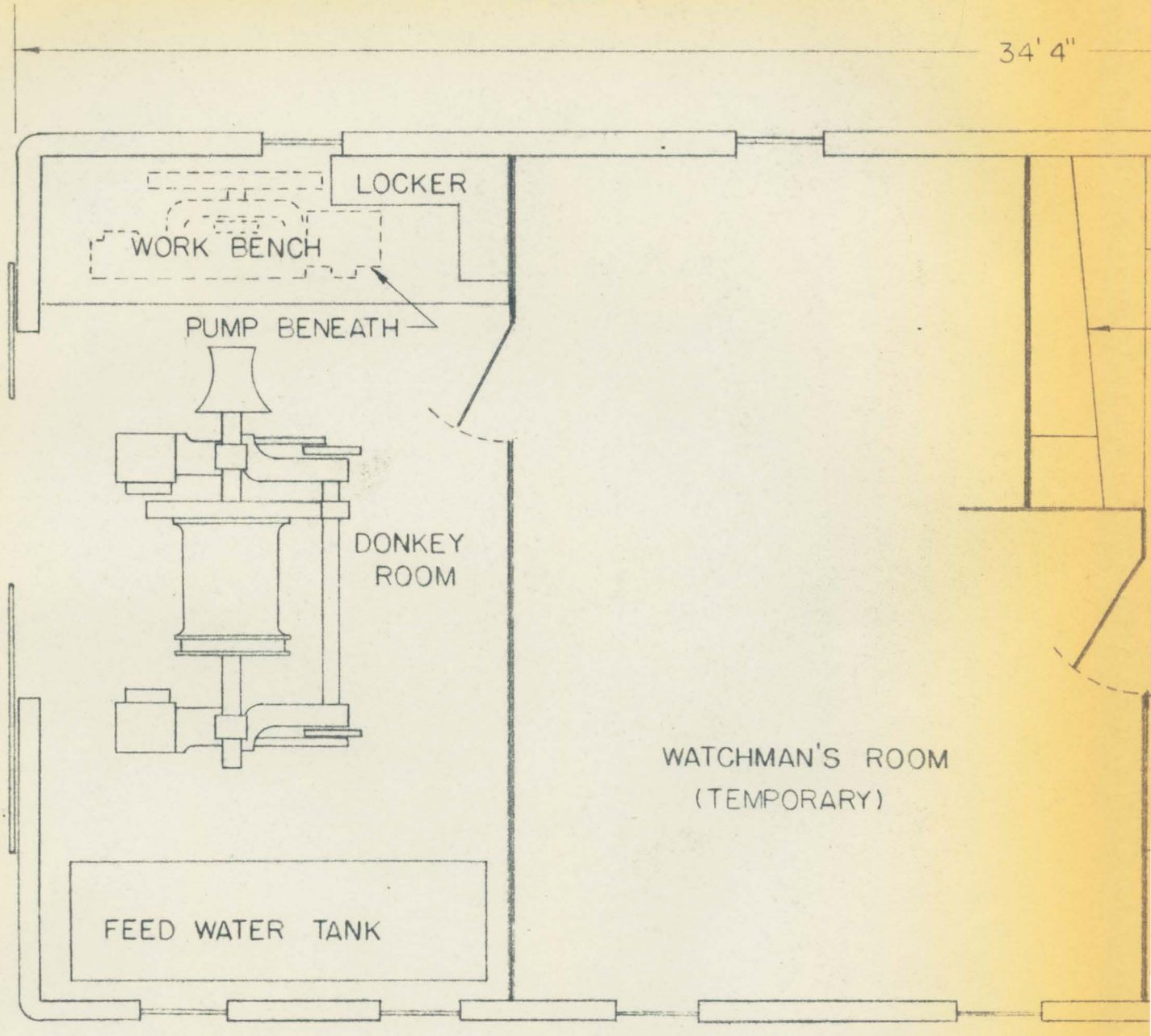
The fitting of these doors will allow the opening at the after end of the deckhouse to be sufficiently enlarged so that the donkey engine, steam pump, and watertank mentioned in our memorandum of 11/16/59 can be taken inside the deckhouse and positioned for display purposes.

Interior of Deckhouse -- Original Arrangement

It was a pleasure to have Ivan Duncan's archaeology in deck plugs (indicating fastenings for bulkheads long since removed) exactly substantiate the best information we have been able to assemble from schooner men on the interior arrangement of the deckhouse. There has been no question about the fo'c'sle being right forward and the engine room being right aft -- existing T & G in the fo'c'sle shows recesses for the ends of side boards for four bunks, for example.

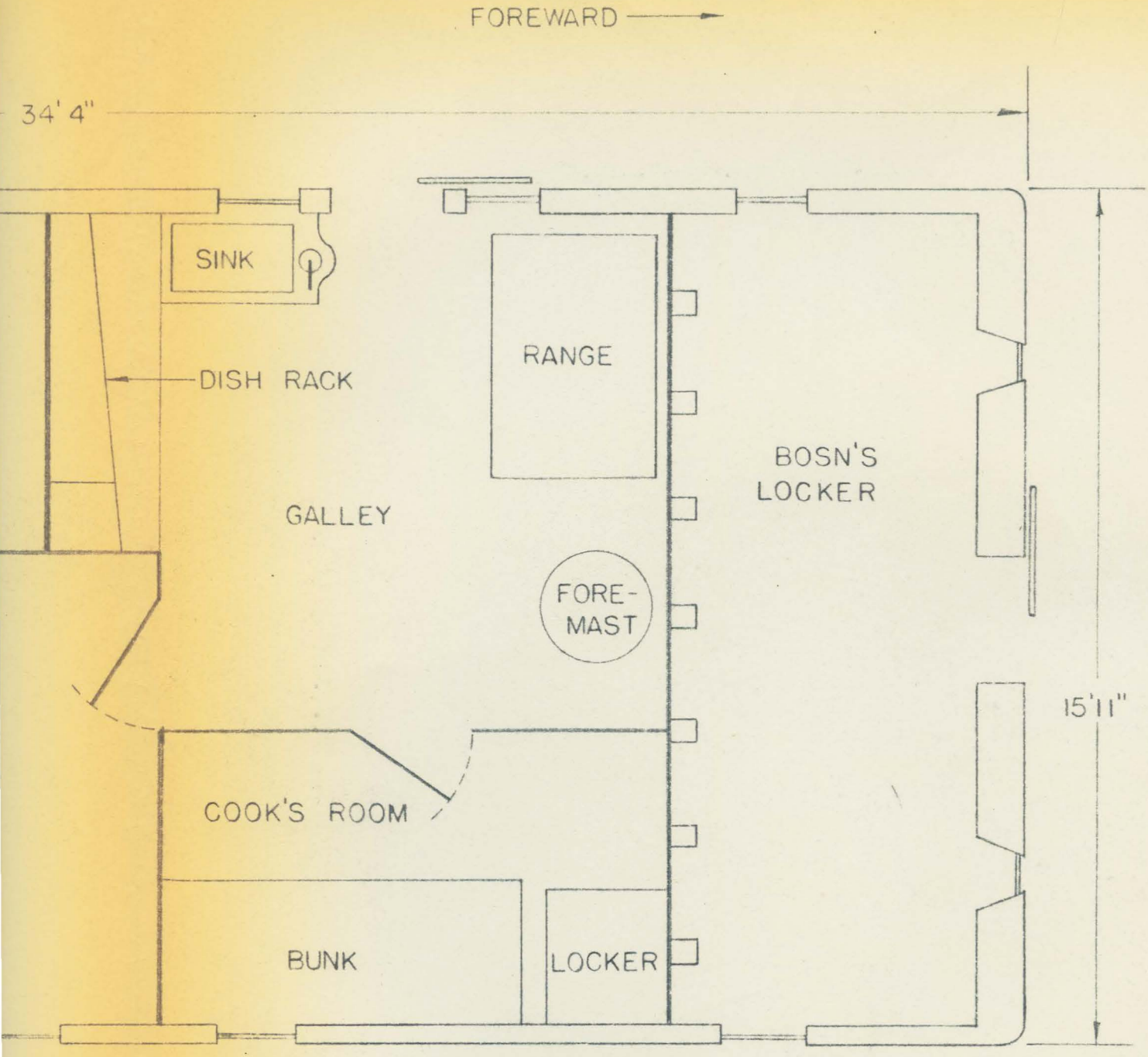
We have determined that it was common practice for no door whatsoever to be pierced through the starboard side of the deckhouse in these schooners, and a faded photograph taken on deck during the THAYER's second Australian voyage in 1918 indicates that she was so arranged. This means that the fo'c'sle was entered from a door in the forward end of the house (clear of the deckload at all times), the donkeyroom through the doors described above, at the other end of the house, and the galley from a door in the port side of the house. The cook had a cabin opening off the galley in the starboard side of the house, and there was also a door leading from the galley into the donkeyroom. This would provide access to the donkeyroom on any occasions when the deckload blocked the doors at the after end of the house. In other words, a single door in the port side of the deckhouse provided, on occasion, access to galley, cook's cabin, and donkeyroom.

Discovery of the row of deck plugs where bulkheads for the cook's cabin once stood indicate that the interior dimensions of this room were 74" fore-and-aft, and 74" athwartship. With this as a point of departure it becomes evident that the fo'c'sle occupied 8' of the deckhouse, and



DECK HOUSE ARRANGEM

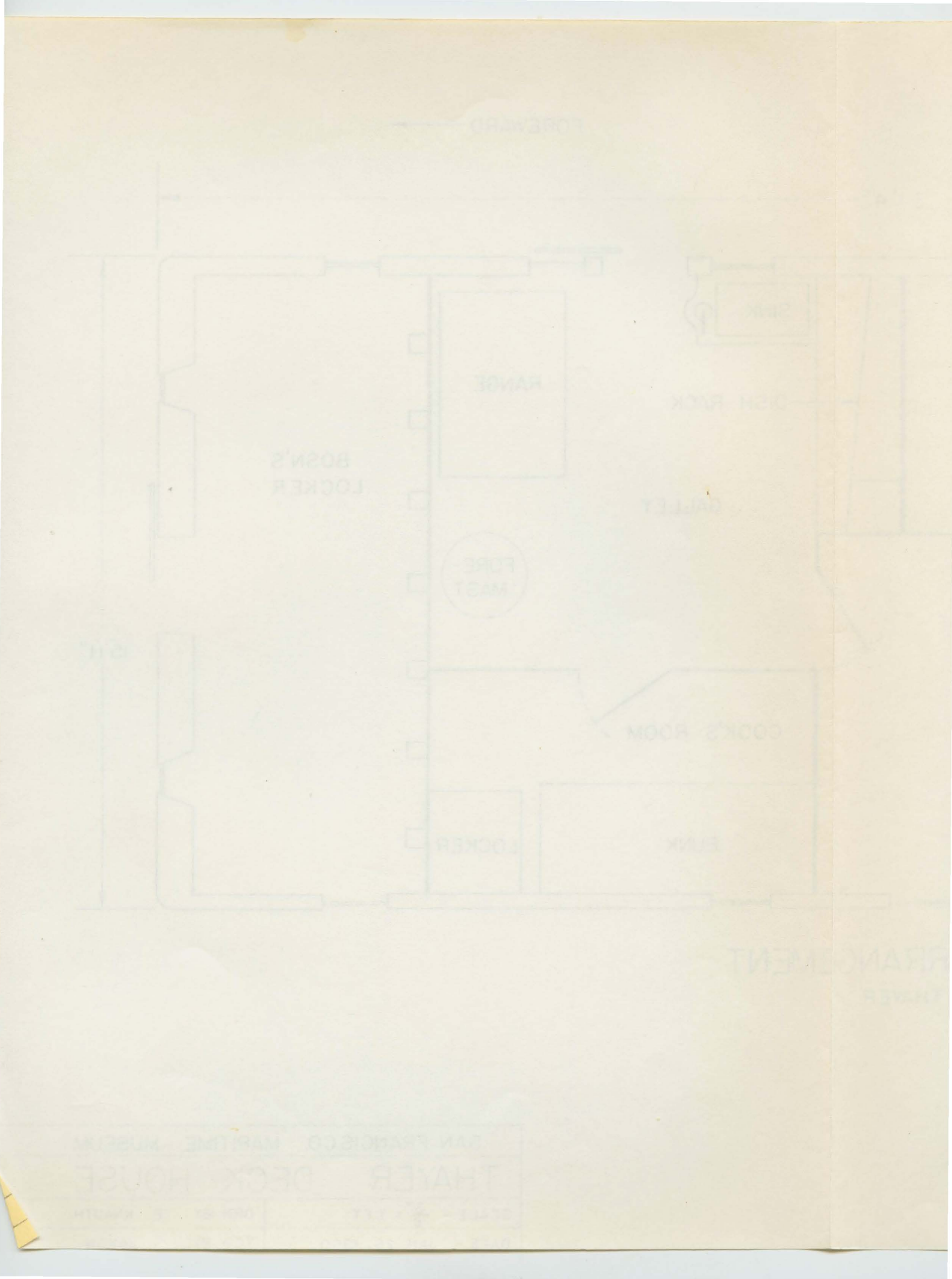
SCHOONER C. A. THAYER

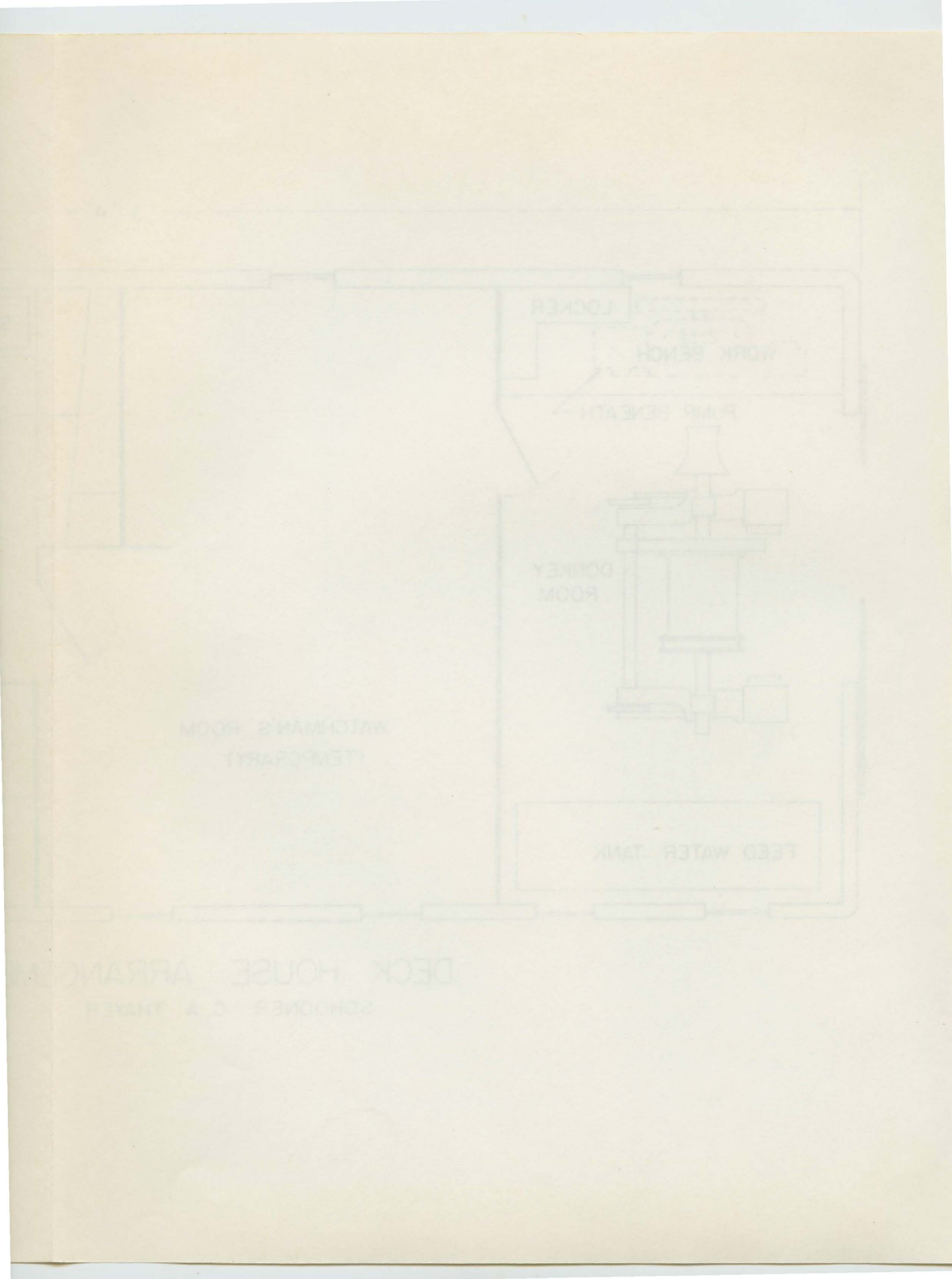


RRANGEMENT

THAYER

SAN FRANCISCO MARITIME MUSEUM	
THAYER DECK HOUSE	
SCALE - $\frac{3}{8}$" = 1 FT.	DRN BY: B. KNAUTH
DATE - JAN 26, 1960	TCD BY: S. JAXON





extended full width (the forward bulkhead of the fo'c'sle is original and so establishes the fore-and-aft dimension of this room in conjuncion with the newly-discovered cook's cabin bulkhead). There was, in all probability, a "dog's leg" formed in the bulkhead across the after end of the fo'c'sle which carried it from the cook's cabin around the foremast and thence directly athwartship to the port side of the house.

Lodge knees on the underside of the deck indicate that the forward hatch has been shortened one deck beam (46"). If, in due course it is enlarged to its original size, and a space equal to that between deck beams is left forward of it, and the after bulkhead of the renewed deckhouse is located at that point, then the outside dimension of the deckhouse, as originally built, becomes 26-1/2'. Using this location of the after bulkhead as a fixed point and the location of the cook's cabin as a fixed point, the length of the engine room fore and aft becomes 10-1/2'.

Interior of Present Deckhouse -- Preparation for Display

The present deckhouse is a product of the schooner's codfishing days and is not only much too long (although of original width), but is architecturally inappropriate. The forward 66" appears to be original in location and construction, although a door pierced right forward in the port side is probably a later addition. The window shutters and slides on this original portion offer good detail for reproduction when the house is rebuilt.

Our recommendation for the best approach to the inexpensive display of this present deckhouse has been to create an engine room by extending a bulkhead across the house forward of the after bulkhead, creating a cook's room with a fore and aft bulkhead on the line of the original, as shown by the deck plugs, and using the original fo'c'sle area as a bosun's

THE GALLEY

May 10, 1960 . . .

It is difficult to tell what is old and what is new in the restored galley. (The "Boraxo" and towel dispensers are temporary, of course.)

The dishrack is from an old Alaska Packers ship, the sink from the scow schooner ALMA, and both are much older than the deckhouse.

The counter is new, the pump was aboard the THAYER. The range, out of sight at the right, is modern, but of a traditional pattern.

PARADE

locker. This fo'c'sle is too short for bunks at the present time, and enlarging it would be a costly anticipation of the more important rebuilding of the whole deckhouse in a few years' time. The fisherman's fo'c'sle below decks will provide a fine interim display of living quarters.

Skylights Illuminating Fisherman's Fo'c'sle

What appear to be World War II surplus porthole fittings have been rigged up, two to a side, to create a skylight to port and starboard of the deckhouse that will convey light to the living quarters below decks. Their function is necessary, but the present plywood covers and the round portholes are out of character. They should be replaced with a skylight cover of conventional construction 1-3/4" thick, with 5-1/2" wide margins, the whole rabbeted for a panel of wired glass in each cover. A hardwood frame 7/8" x 1-1/4", fitted with 5/16" brass rods spaced approximately 2" apart should be fitted in each skylight cover as protection for the glass. This frame should have two equidistant center dividers to re-enforce the rods.

Location and Arrangement of Gypsy Head Shaft on Top of Deckhouse

How far forward or aft this athwartship shaft is located is determined precisely by the location of the donkey engine in the engine room underneath. A vertical shaft, driven by a bevel gear on the drum shaft of this engine abutted the underside of the gypsy head shaft, which it engaged with a pair of bevel gears.

On the C. A. THAYER, as on most schooners, this placed the gypsy head shaft at the extreme after end of the deckhouse roof. It was supported on three wooden blocks, which scale off from old photographs as being 6-1/2" by 12" by 60" in size. These rested on edge, the fore

and aft uppermost corners were dubbed off in about a 5" radius, and the bearings were located close to the after end.

To prevent the bevel gears from fouling the ship's gear, an athwartship box formed of 2 x 12's spanned the distance between the gypsy heads. Dimensions of this box are 13" by 20" by 141-1/2".

Because of the excessive overhang on the present codfisherman's deckhouse, location of the gypsy head shaft directly above its driving mechanism, the donkey engine, will move this shaft in a greater distance from after margin of the house than would be case with the original deckhouse.

Removal of Boat Skids

C. A. THAYER was not originally equipped with boat skids because of their interference with the loading and discharge of lumber on deck. The present skids were fitted for her later experience codfishing and should be removed.

The THAYER carried a square sterned, carvel-built ship's boat on deck, as well as a somewhat smaller boat of the same model in the stern davits. The Maritime Museum has been offered a boat of this type, which the Association will be pleased to rehabilitate and lend to the THAYER. This boat was carried in chocks alongside the port rail, capsized on the main hatch, or on top of the forward house when the decks were filled with lumber.

DISPLAY OF DORIES

It is recommended that one dory be kept intact with the innovations that were introduced by Captain J. E. Shields in the final years of schooner codfishing. The other three dories should be stripped of wells, bulkheads, bow tent, and thwarts, and nested. In the early years of codfishing for Captain Shields, the C. A. THAYER carried her dories in this fashion.

Following is an extract from a letter from Harold D. Huycke dated August 11, 1959, based on an interview with Ed Shields, son of Captain J. E. Shields:

"Shields always bought his dories in carload lots, 15-20 per lot, from Hiram Lowell, Amesbury, Massachusetts. They were full-bodied Eastern dories, and for many years, while the dories were propelled by oars, they carried a large number of them and nested them on deck. You will notice in the logbooks that the schooners carried upwards of forty men on board to man these dories. Then about 1927 the first power or outboard motors were introduced, and they proved to be pretty successful. For one thing, a dory need not worry about getting to leeward of the schooner. In days of sail and oars, the dories dared not get to leeward, since it was well nigh impossible to pull a loaded boat against the wind and sea to the schooner. Sails were used, of course, but with a flat bottomed dory they were good only for running before the wind, downhill toward the schooner. As outboard motors came in the dories changed in size and number. You will note in Captain Shields' scrapbook there is a brief mention, quoting him, that the dory using outboard motor became far more efficient. Outboard wells were built in and it became harder to nest boats. But there was no need to nest so many since a powered dory could do more than a single one, and therefore cut down the number. Same with the crews.

The canvas hood and other structures were generally developed by the individual fishermen themselves, until the hoods became permanent, and were installed -- I suppose at the Poulsbo plant. Sails were last used, at least by Shields, in 1928.

During the War, 1941-45, a few dories were built by a builder in Marysville, Washington, a small town just north of Everett. They were a little finer forward, and not as handy in the water as the Eastern dory. Shields bought a batch of these as Navy surplus right after the War, and you may have one or two of them there. Somewhere in the boat is a builder's plate and you might find it by looking carefully for them. The fishermen were pretty adept at handling dories, and Ed says some of them can quickly tell the difference between a Massachusetts dory and a Marysville dory. Incidentally, the nested dories were one foot shorter than the ones you now have, and they had no extras in them."

MAIN HATCH -- Public Safety and Waterproofing

It is our recommendation that the original hatch-covers be replaced with hardwood gratings.

While gratings are not characteristic hatch covers from the C. A. THAYER period (at least not on a small merchant schooner -- the Navy was using them at this time), they offer the best combination of public safety, ventilation and light that we have been able to discover. Moreover, the grating "theme" would be found aboard a small schooner like the THAYER in the form of a small grating under the wheel, and possibly at other points of excessive deck wear.

The virtue of a grating is that nobody can fall from deck into the lower hold, while at the same time air and light can pass through. The dappled sunlight pattern that passes through is attractive and traditional. In case of a sudden rainstorm, a tarpaulin is quickly spread across the gratings and secured with hatch battens and wedges. The use of gratings obviates an unsightly (and less safe) handrail around the hatch opening.

Dimensions of these gratings should be 37-3/4 x 59-1/4" and they should be twelve in number. Margin pieces should be 1-7/8 by 2-3/4", athwartship grating members 2 by 3", and fore and aft grating members 7/8 by 1-7/8". Apitong or some of the less expensive hardwoods can be used, but the best long-term investment, because of its natural, water-resistant oils, is teak. A satisfactory finish, less costly to keep up than spar varnish, and yet harder-surfaced than boiled oil is a product with the trade name Penetrol.

FORESTAYSAIL CLUB BITT

The small spar at the foot of the fore staysail was fitted with an iron gooseneck which attached to an upright bitt or post hard abaft the forestay.

Dimensions of this bitt are 8 x 8 x 44" in height. The bitt was let through the deck and mortised into the top of the bowsprit, with a slight rake aft. The bitt was slightly tapered from deck to top, and the top was rounded athwartships. The distance from the center of the bitt to the forestay is 8".

An iron band formed of 1" x 4" strap extended over the top of this bitt and halfway down either side. It was through-bolted at three equi-distant points. This strap terminated in a vertical pin, which received a forged eyebolt driven in the end of the staysail club. The forward end of the staysail club was iron banded to prevent this eye splitting out.

It appears that the fitting on the present substitute bitt (steel tripod) and the staysail club have been reversed. It is recommended that the strap on the club be removed and fitted to the new bitt, and that the fitting now mounted on the tripod be transferred to the end of the club.

ACCESS LADDERWAY TO HOLD

[Submitted separately to
H. J. Dring, Supervisor
of the Historic Ships Pro-
ject. 20 October 1959]

ACCESS LADDERWAY TO HOLD

1. Summing up discussions with you on this subject during the past ten days, the intent is to move the visiting public in and out of the cargo hold.

    a. Safely, in view of ship movement (particularly rolling) at the Aquatic Park berth location.

    b. Without creating a structure that by size, location and traffic movement will dominate this most important of display rooms.

    c. With a structure of style to suit the wooden ship period, and yet a conscious "creation", seeking an architectural effect.

You have asked that this access stairway be tied in with ingress and egress from the fo'c'sle display area.

2. The best location is the forehatch. Ladders leading in and out of the main hatch, amidships, would cut the lower hold in two from a display standpoint. The coming and going of visitors would intensify this effect -- the ladders and the traffic would become the principal exhibit down here rather than the impressive and lengthy sweep of the cargo hold.

3. Two separate ladders, crossed athwartship, provide the best design and afford the most safety. The crossed pattern is reminiscent of ladders leading down the hatches of old-time men-of-war. One ladder is for "in" traffic, one for "out". This allows for narrow ladders with the handrails close together. Result is a tendency for the visitor to hold on to both handrails simultaneously, a marked safety feature with shore people visiting a ship that will not be motionless.

4. These ladders should be of Douglas fir, of open construction (without risers), in general appearance resembling a heavy-set deck ladder. Unavoidably, they will be eye-catchers, even in the forehatch, and an oiled finish would be in sympathy with the wooden nature of their surroundings.

5. The ladder leading down from the port side of the hatch coaming is the egress ladder. This should be full length, reaching the ceiling of the hold. A pad should be constructed to fill in the few feet between the foot of this ladder and the thick strakes of the ceiling. This is to prevent tripping over the ledge formed by the edge of these thick strakes. This pad should be tapered at its fore and aft edges for the same reason.

6. The ladder leading down from the starboard side of the hatch is the ingress ladder. This will terminate on a platform approximately eight feet square at a level with the sill of the existing door into the fo'c'sle. The platform to be joined to the door by a narrow gangway slightly wider than the width of the door.

7. This platform to be formed of plank from eight to fourteen inches in width, whatever you have available. Planks to run fore and aft in keeping with direction of ceiling. Gangway and platform should come apart, but run same width plank through both structures, avoiding any jogs where they join.

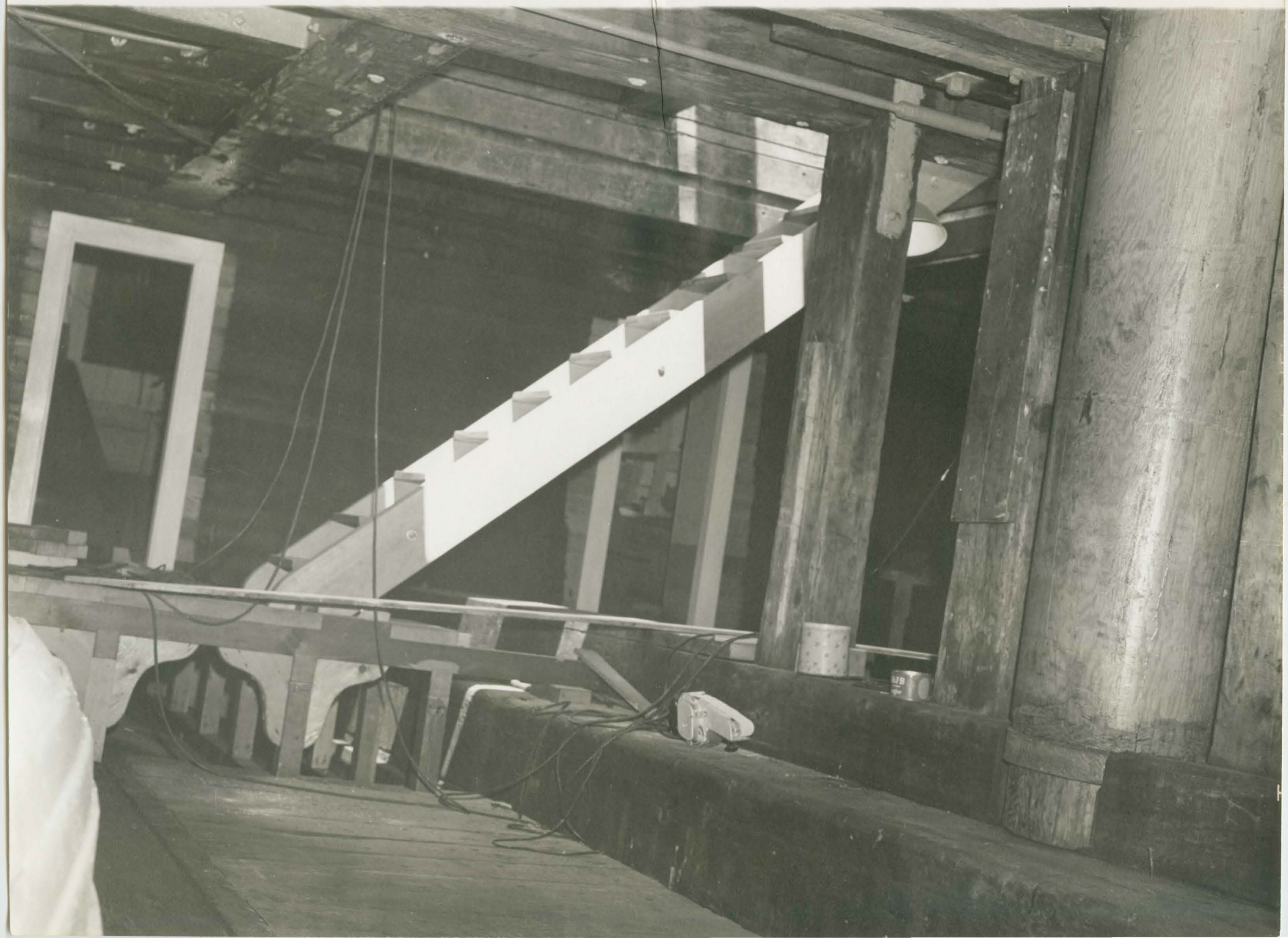
8. Platform to be supported by 5 x 5 posts, if you can conveniently mill this size out of your stock. Posts to have a turned section reminiscent of turnings supporting taff-rail, otherwise square in section. This will be the only attempt at decoration in this entire structure. It will relieve the "speaker's platform" effect somewhat when viewed from the after part of the hold. For the same reason it would be best to make the angle bracing

LADDER TO THE HOLD

May 10, 1960 . . .

The entrance ladder lands on a platform, from which the visitor can view the whole sweep of the hold before turning to enter the door to the fishermen's forecastle.

The exit ladder will rise from starboard (abaft the door at the right) to port, forming an "X" with the entrance ladder.



supporting the legs of this platform of round iron flattened at the end and drilled for bolts.

9. The purpose of having a separation between the platform and the gangway is to make the whole more easily removable. The need for this will occur from time to time when the vessel is under repair, or there is reason to get under this structure to apply wood preservatives, etc. Similarly, the ladders should be removable.

10. After our lengthy discussions on the matter of handrail construction it is our conclusion that a railing formed of steel bar or pipe with welded joints ground smooth is most satisfactory. We have looked into a variety of wooden handrails, and combinations of wood and metal and have concluded that a "fussy" effect obtains from such construction. Iron handrailings can be made with a light, airy construction creating a minimum of obtrusiveness. For this reason they will complement the heavy wooden ladders, which will carry the wooden ship "theme" without visual diversion.

11. These railings will be welded up as units, one for each side of the two ladders, one for the platform, and one for each side of the gangway into the fo'c'sle. When, for any reason either ladders, platform, or gangway are removed their railings will move with them and not require detachment.

12. Ladder railings should be 2'6" high, second rail spaced down 12". Platform railings to be 3' high, second spaced down 18". Railings should be formed of '" rod, with a minimum of stanchions, stanchions to be welded to a triangular gusset plate 5" on a side (rounded corners) and stanchion joining gusset plate in a 1-12" radius. No stanchion to be located at extreme corner of platform, railings to turn corners with a 4" radius. Top end of upper railing to project in an 11" radius which meets and is

welded to, topmost stanchion. This downeaster style finial will enable visitors to grasp a handrail on either side as they encounter the hatch coaming.

13. The above mentioned gusset plate will bolt to the sides of the ladders, but to the horizontal surface of platform and gangways. We suggest that ladders, platform and gangways be built first and the most attractive and minimum spacing of stanchions be determined by mock-up.

14. These railings should be red leaded and painted a color complementary to the schooner's color scheme, such as brown, green, or gray, rather than being galvanized.

14. The traffic flow to the lower hold of the schooner will descend the ladder from starboard to port. On the platform the visitors can pause, with a fine view of the entire length of the cargo hold. They will then proceed into the fisherman's fo'c'sle, and after inspecting it, find egress through a new door, to starboard, to be cut in the bulkhead in the same location and of the same size as the existing doorway to port. Here a set of steps of the same construction as the ladders leading into the hold will carry them a few steps down to the ceiling of the hold. From there they can either reach, or ascend, the exit ladder, or they can explore the after end of the hold.

Here a simple "stile", consisting of blocks lagged into either side of the salt box allows them to reach the other half of the hold. This stile is optional. Without it, one half of the hold (fore and aft) will seldom be obstructed by people and the view previously described, from the platform, will be unimpaired.

MODERN WOOD PRESERVATION TECHNIQUES

Wood Preservation

Pentachloropehnol Gel

Wharf Borers

MODERN WOOD PRESERVATION TECHNIQUES

From a letter of Austin W. Morrill, Jr., Special Assistant for Entomology and Wood Preservation, District Public Works Office, Twelfth Naval District.

This letter summarizes discussions with Maritime Museum personnel concerning the preservation problems of the C. A. THAYER and WAPAMA.

Dear Mr. Kortum:

In response to your request for information as to Navy practice in the treatment of wood rot and related problems, and following an inspection of the vessels BALCLUTHA, C. A. THAYER and WAPAMA, I am glad to append my observations, comments and advice as to the various treatments called for. These comments are not to be taken as official Navy or Twelfth Naval District Public Works remarks or policy, naturally, but are in line with the standard Navy practices. The use of trade names is for your convenience only and may be taken to indicate a type where there are other brands of an equivalent nature. Obviously, the Navy does not recommend a particular brand above another, assuming that both meet the Federal specifications or the specifications of the particular need.

The notes which your Mr. Roger Olmsted took concerning our conversation about the BALCLUTHA seem to me to be fairly complete and entirely accurate, and will merely be summarized here. The comments apply equally to all these ships. It is suggested that the pentachlorophenol solution used in swabbing the deck should be not less than 4% and preferably 5%; if the glazing effect of linseed oil is desired, a 20% concentrate of penta is available which could be diluted with the oil to 5% and utilize about the same proportion of penta to oil as at present. If only the water repellent effect of the linseed oil is desired, a water repellent penta mixture is available which meets the Federal Specification (Interim) TT-W-00571d and TT-W-572. The former specification is for treatment practices and the latter for the water repellent material. Military Spec. W-13518b covers a linseed oil penta mixture.

The treatment of the framing and timbers in the portions of the ship's hull above the water and bilge line and between the outer sheathing and the sealing can best be done by forcing a pentachlorophenol gel or emulsion paste of mayonnaise consistency into the crevices between the timbers with an alemite-type or caulking gun and by spraying it into the voids with a large gauge nozzle of Spraying Systems type, such as 8006 at the end of a long, bent wand. The figureheads which have rotted cavities can similarly be treated with the paste materials, remembering not to overtreat. The oils will evaporate leaving a clean appearance to the wood, although a small skin of material remains on the surface and must be removed before it can be painted. Where original paint is to be preserved, the gel should not be applied over it.

There are two materials of the gel or mayonnaise type now on the market -- one a product of the Chapman Chemical Company called "Polnu", a jelly of heavy consistency and dark brown color; the other, a product of the Wood Treating Chemicals Company called "Wood-Treat", an emulsion of mayonnaise consistency and light color. This latter can be obtained in two grades of solvent; the light color is due to the air and water in the emulsion, just as the dark color of the other gel, and of many solutions, is due to the type of solvent used.

The action of the jelled pentachlorophenol when applied into the interstice between members is to spread laterally and this spreading will continue a distance of as much as 18 inches or two feet. By boring through an upper member but not a lower one beneath it, the pentachlorophenol may be caused to squeeze between them. Liquid solutions can similarly be forced into such spaces. The advantage of a semi-solid material is that it will gradually be absorbed by the wood and it has been observed to penetrate by this means across the grain and for considerable distances.

Originally skeptical about this penetration, so much greater than is obtainable from even repeated brush coatings or a prolonged dipping, we have found it a remarkably effective method of in-place treatment. For instance, when the material is "sprayed" or squirted into spaces between members, even though it does not cover all surfaces, the spread of the penetration between the areas it does touch will result in eventual coalescence of treatment. This is true for the above-mentioned 18 inches to two feet, and conceivably might be made to continue further by heavier application, but this point has not been resolved. A boring 1/4" diameter is sufficient.

Whenever second coatings are to be applied, with liquid or solid forms, they must be applied before the first has quite dried or the penetration of the second coat will not be so good as expected. As was stated above, the skin remaining from the application of the solid material must be scraped away before paint may be applied. The surface might be sponged off with clean mineral spirits or with penta solution. After about half a day's drying, paint may be applied. If the gel is applied to wood from the reverse side and penetrates through to the surface which has been painted, softening of the paint might occur, but this will harden up again when the solvent evaporates. Nevertheless, when the paint is historically valuable, and cannot be mended without losing value, care

might best be exercised. I have not had any experience in this phase of the subject; we have never had paint soften appreciably.

With timbers which have decayed cavities but are not structurally unsound (beyond the limits of safe use), the punky parts can be removed and the cavity treated with the gel after which the void can be filled with cement, plastic, or a wood plug. If the latter, the plug should be dipped in penta solution and a mortar of gel applied when it is set. It is not advisable, however, to use the gel as a bedding compound since it will sink into the wood and leave a space or void unless the members fit closely or are forced into position. In this case, filling the hole with gel before the plug is inserted is a good practice. The gel is compatible with the usual oil-based bedding compounds such as white lead, and these may be applied over the penta.

As we discussed, the treatment of wood with preservative not only prevents rots, which cause the wood to lose its resiliency, but also hardens the wood to some extent. In consequence of both of these effects, the life of decking, stair treads, etc., are lengthened and there is less surface scuffing and mechanical damage. The most desirable method of treating large timbers is by pressure and incising, and this may be done both to whole timbers and to shaped members. The cost is about $40.00 per thousand and the treatment is available locally in Alameda from the J. H. Baxter Company, and from others elsewhere. Despite the general excellence of this method, when large timbers (the size of piling or utility poles, for instance, of 14 x 14 beams) are pressure-treated, there remains a central area which often does not accept the treatment. Under good conditions, this is heartwood and not so susceptible to rot. Nevertheless, rot can enter if the timbers are cut to expose this untreated area and the new surfaces must therefore be brushed or sprayed after carpentry. For this reason, and because of the higher initial cost, pressure treatment is not always practical.

On the other hand, when timbers are brush-treated by hand, the cost of the labor often brings the total cost close to that of pressure-treated wood. Thus, if some timbers are not to be shaped materially or can be pre-shaped and then pressure-treated, this is often done and a combination of pressure and brush treatment is employed.

Much of the THAYER and WAPAMA timbers appear to be sound in the sealing and ribbing areas and it may appear to be too expensive an operation to try to treat them by boring holes and squeezing in material. This procedure would give a considerable measure of protection against future trouble from rot, but it may be deemed to be not practical. If it is resorted to, or if particular areas seem to threaten to be susceptible to rot, the holes to be bored need not be larger than will accomodate a tube of copper or plastic with an I.D. of about 1/8 inch. They should extend through the sealing only. Gel can then be extruded into the voids with ordinary air pressure, or into the spaces between timbers with an Alemite-type gun, as described earlier.

Application of Penta Gel Above the Salt Shelves

The reference in Mr. Morrill's letter to the application of pentachlorophenol gel to timbers by means of a spray nozzle is in response to discussions with the Museum staff and Mr. Harry Dring of the deterioration problem in the area below the waterways and above the salt shelves, between the planking and the ceiling. This area is above the ventilation holes cut through the ceiling, and in our opinion represents one of the most serious potential trouble-spots in the ships from the standpoint of rot development.

Air circulation is here almost non-existent, and fresh rain-water leaks down through the seams around the timberheads, threatening the tops of the frames, the clamp, the underside of the waterways, the inside of the planking and ceiling. The lower side of this area is bounded by the salt shelves, which may be seen by looking upward through the ventilation ports in the ceiling. When the C. A. THAYER was built, this area above the salt shelves was filled with rock-salt, for the double purpose of absorbing moisture that reached the adjacent timbers, and converting this leakage to brine, which had a hardening and preservative effect on the wood it reached.

All of the salt was dissolved many years ago, of course, and there is no way to replace it, even were it desirable to use such a primitive preservative. The pentachlorophenol gel would seem to offer a desirable application in this hard-to-get-at area. It might be either sprayed upward, if the salt shelves were removed, or be squirted downward through holes bored in the top of the waterways between the frames.

The peculiar virtue of the jellied pentachloraphenol is that a heavy (say, 1") layer can be applied at one shot, and it will adhere to the surface

until it is gradually absorbed into the wood. A liquid application would run off to such an extent that even repeated application would probably not give the penetration of the gel.

Wharf Borers

A species of wood-boring beetle was first observed in the hold of the C. A. THAYER in the late spring of 1958, and the larvae of this bug was found in some soft spots in the ceiling of the coal locker (underneath the fishermen's forecastle) early in the spring of 1959. With the assistance of the entomology department at the University of California, we were able to identify the larvae as those of the "wharf borer," a member of the furniture beetle family related to the "death-watch" beetle which had all but eaten up Nelson's VICTORY.

Perusal of the British Museum's publications of furniture beetles revealed that the wharf borer larvae thrives on "punkey" wood, that its life-cycle is about one year, and that the mature beetle emerges from the wood late in the spring. In the case of the C. A. THAYER, fumigation at about the time the beetle was due to appear, or heavy treatment of the suspected areas with pentachlorophenol seemed the most practical method of attacking the menace.

Unfortunately, neither the personnel nor material was available when the beetles appeared unexpectedly early -- in the first week of May. Only a few of these beetles had been observed by the watchman the previous spring, and only a few of the larvae had been found in early 1959. But a completely unsuspected degree of infestation was proved by the appearance of thousands of beetles in May of 1959.

The only remedy immediately available was the household-type

"bug-bomb," and a number of the bombs were released in the hold with great effect. As soon as an adequately large supply of pentachlorophenol could be procured, the entire hold was drenched, and the solution was pumped into the frame bays (between planking and ceiling) through the ventilation holes.

Apparently the treatment was quite effective, for although a few beetles have appeared early in May, 1960, there does not seem to be the infestation observed last year. On the other hand, it is clear that the wharf borers are not completely exterminated, and that fumigation may be desirable. In the meantime, repeated treatment of the timbers with pentachlorophenol can assist in the control of these pests.

G. F. MATTHEWS' NOTES ON THE

C. A. THAYER

Gordon Frazier Matthews, builder of the last wooden steam schooners on the West Coast, is the son of Peter Matthews, one of the pioneer shipbuilders of the Grays Harbor and Puget Sound areas.

From an interview aboard the C. A. THAYER at Oakland, 12 June, 1959.

G. F. MATTHEWS' NOTES ON THE C. A. THAYER

Many of the lumber schooners carried water in wooden tanks on deck, such as the tanks from the schooner BEULAH that are presently aboard the THAYER. Other schooners carried large steel tanks in the hold, forward. The schooner VIGILANT carried a cylindrical tank twenty feet long and eight feet in diameter right forward on top of the 'tweendecks beams. Even the smaller coastwise schooners carried a large supply of water -- one of the THAYER's type might carry a couple of thousand gallons.

Some notes on treatment of the decks aboard West Coast sailing and steam schooners:

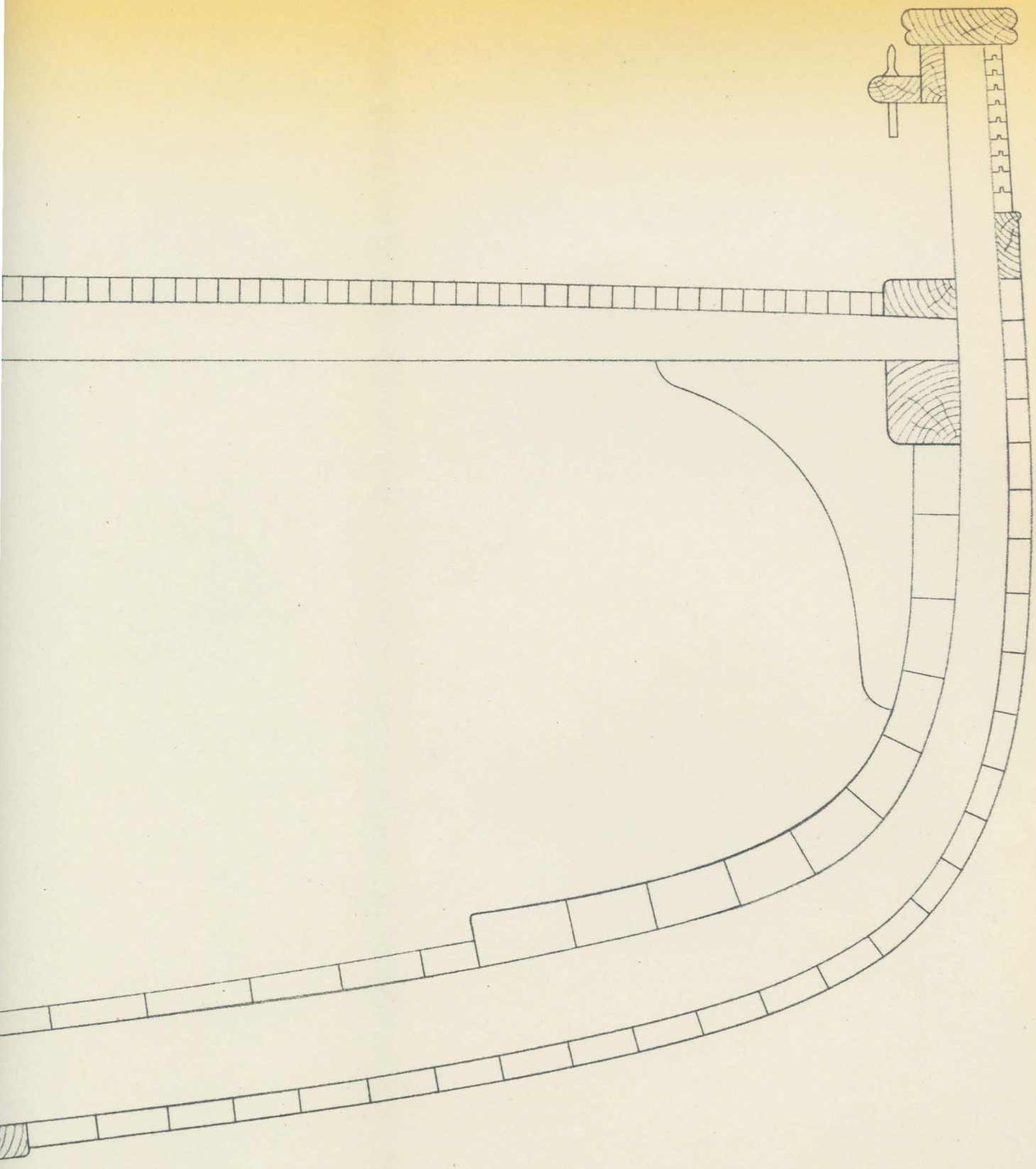
Generally, tar oil was not used; rather raw linseed with coal oil in it, to make it penetrate better. Captain Linsky of the DEFIANCE said that once a year he used to buy a barrel of oil and go all over underneath the decks. He would apply the linseed all the way down to the lower end of the knees. On steam schooners they frequently put crude oil on the decks, but the crude oil would penetrate into the oakum and ruin it.

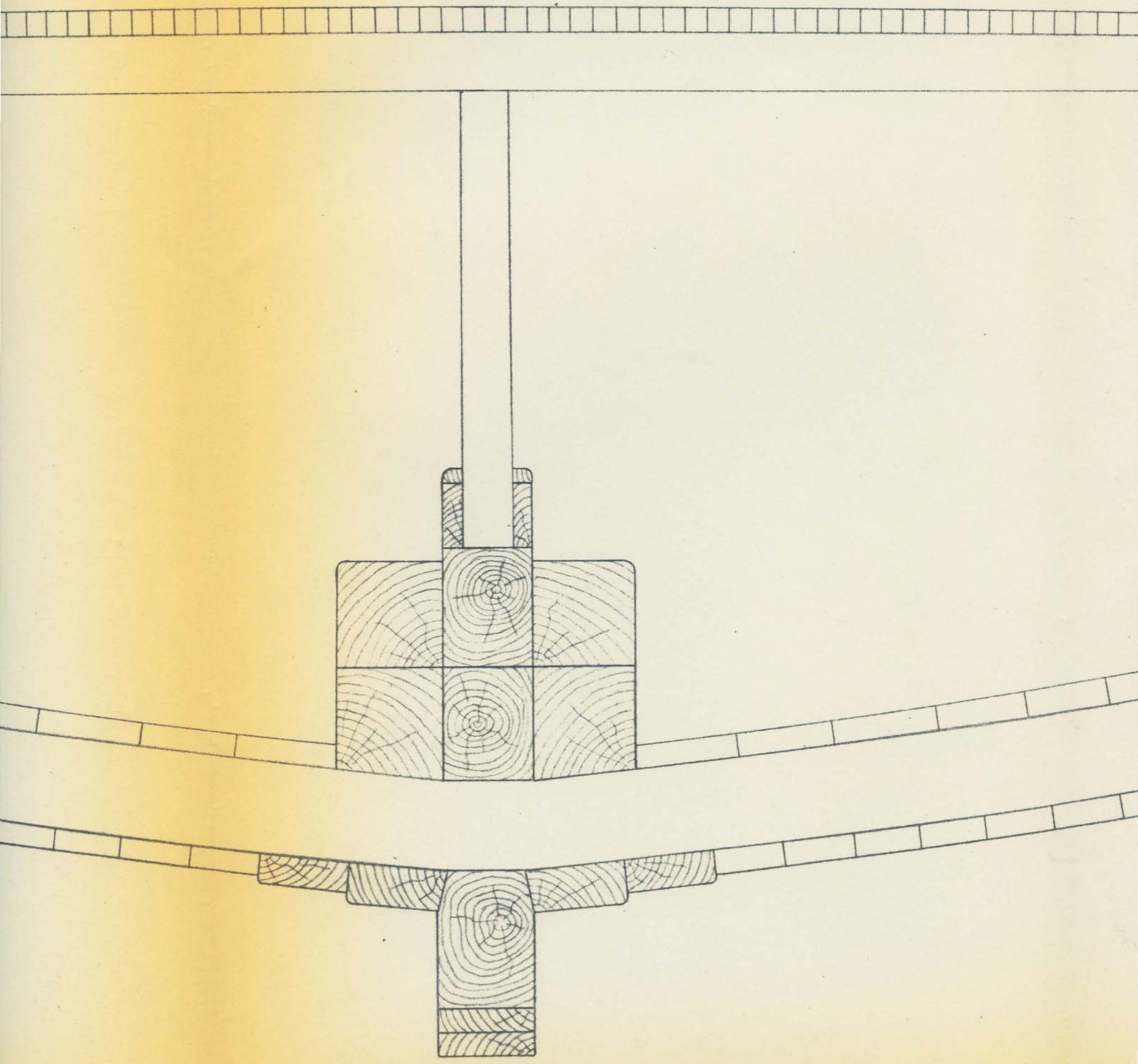
Captain Anderson of the HELENE and some of the other steam schooner skippers stopped using crude oil on the decks and used Stockholm tar instead. Many skippers preferred the tar oil to the linseed oil because it had more body to it. It was the Scandinavians in particular who used Stockholm tar. Pacific Coast men, on the other hand, usually stuck to linseed oil.

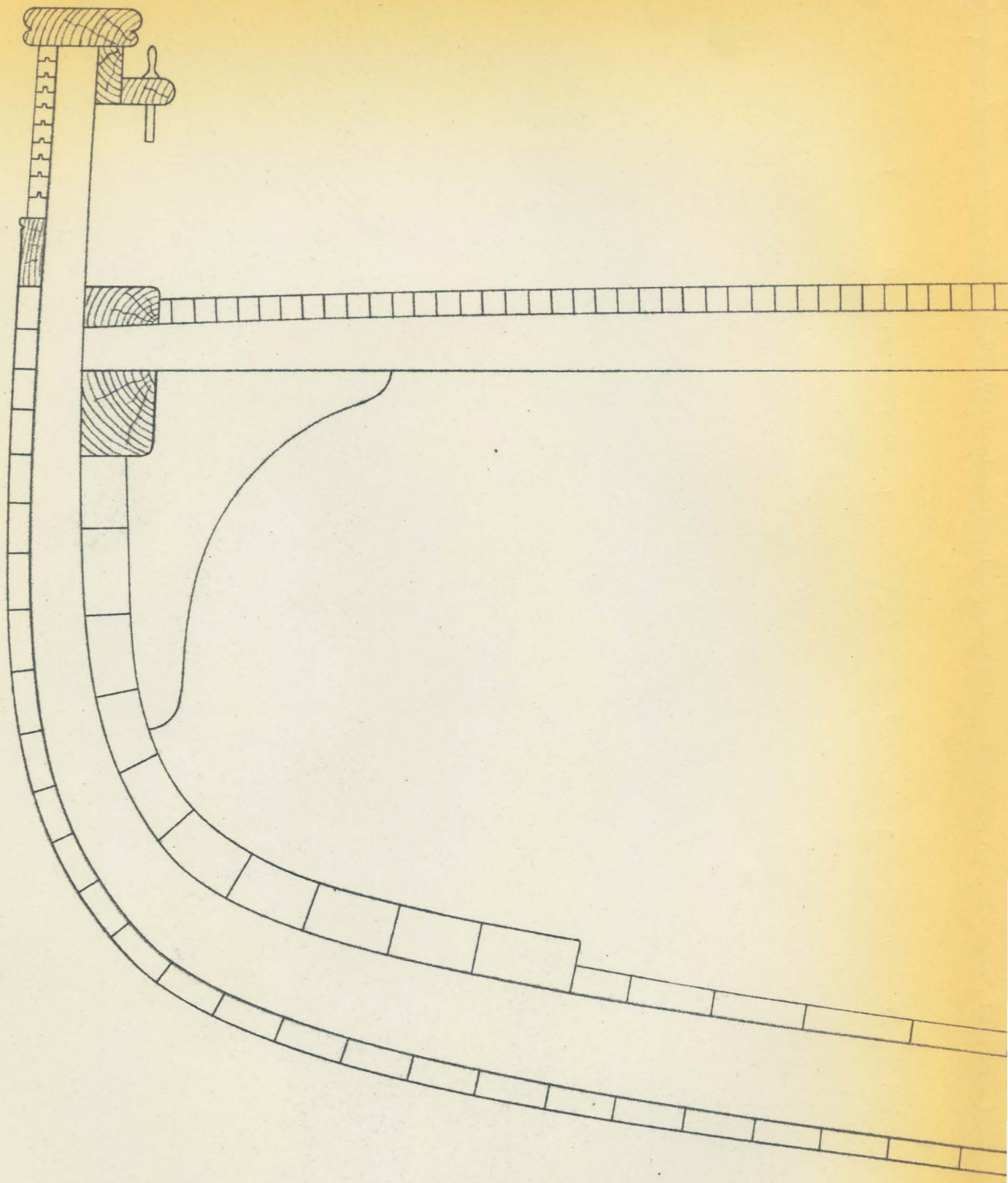
The quarterdeck or poopdeck on the schooners they generally kept as bright as they could. Captain Dolloff of the COATES, instead of using

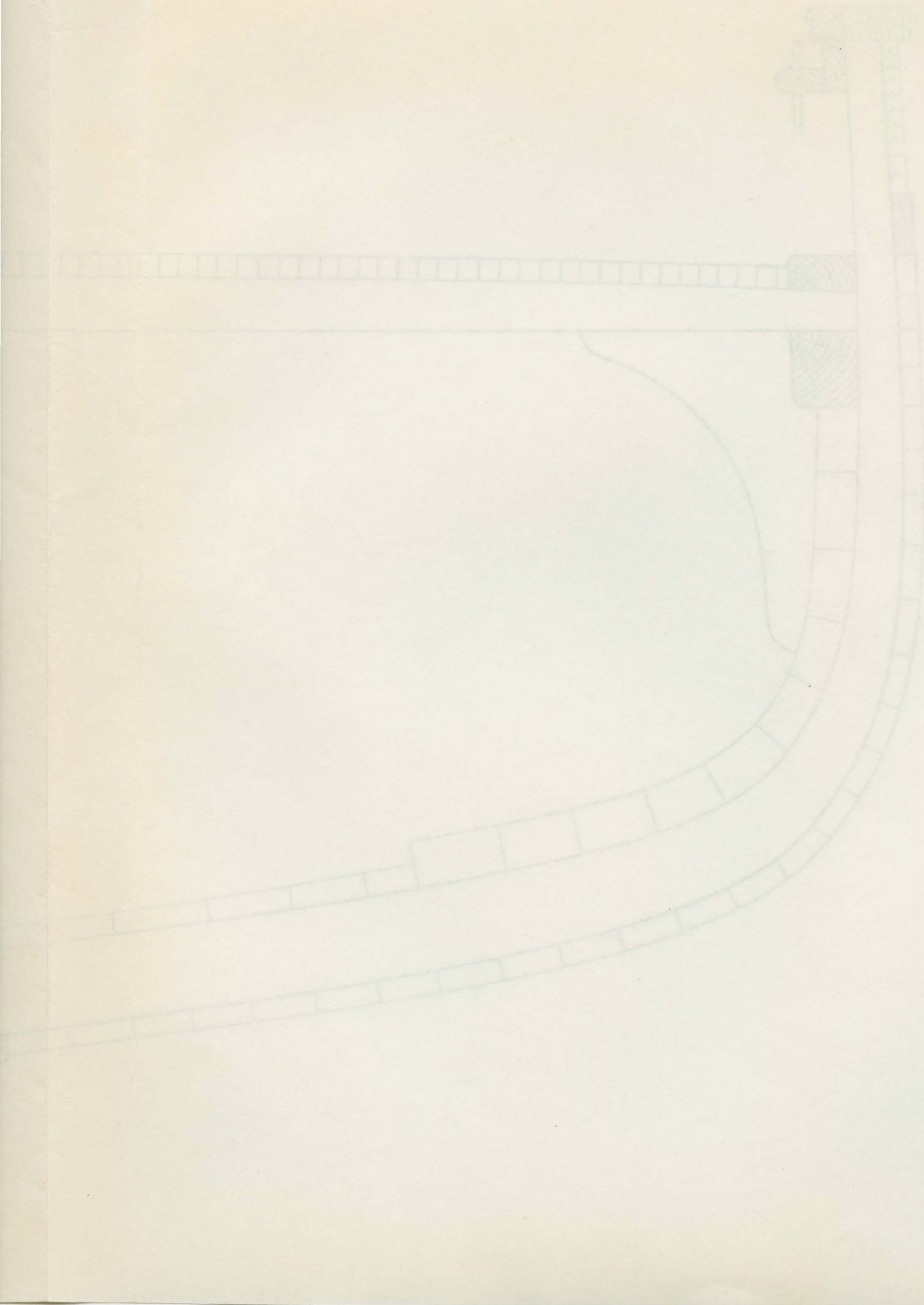
MIDSHIP SECTION -- C. A. THAYER

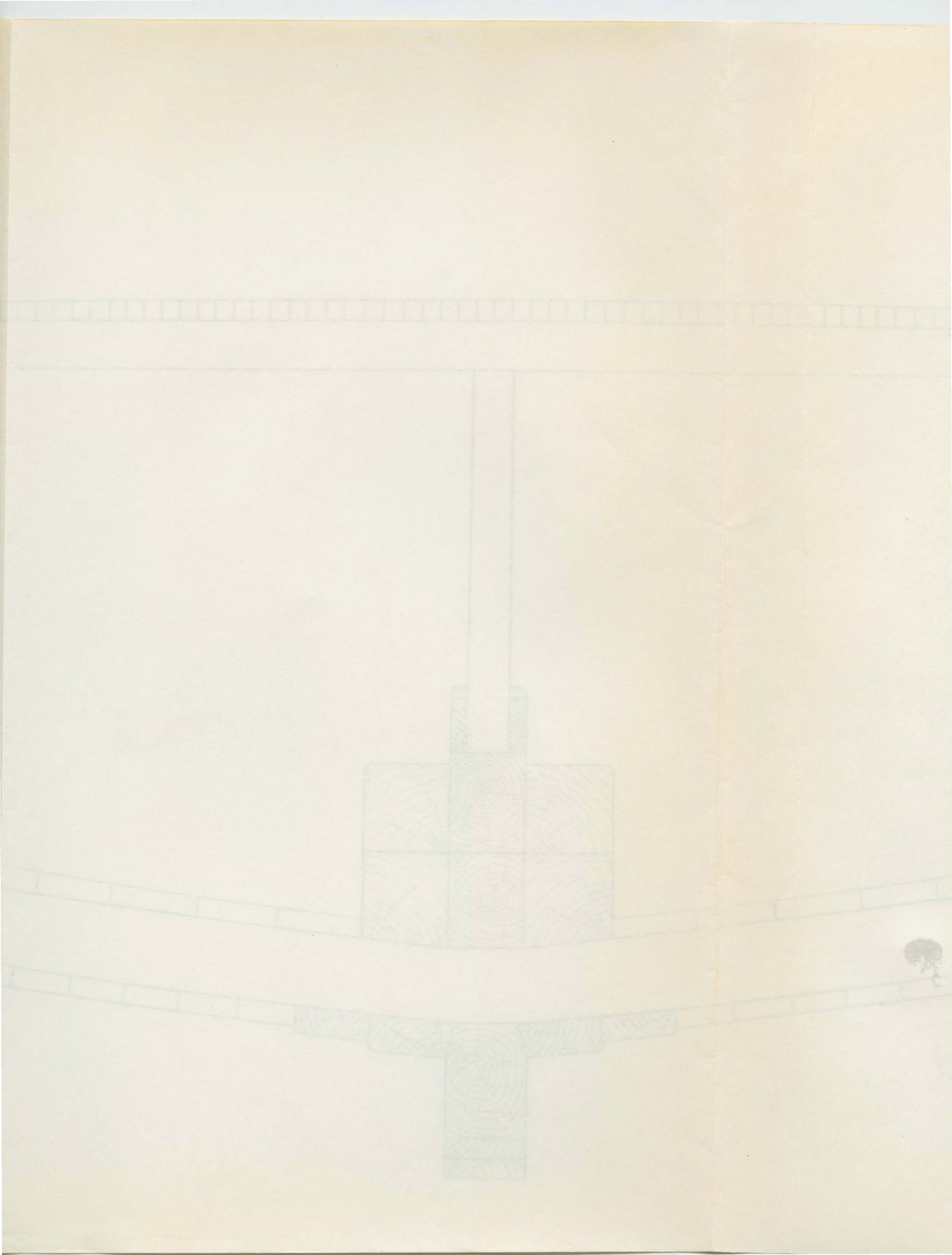
San Francisco Maritime Museum,
March 1, 1960.

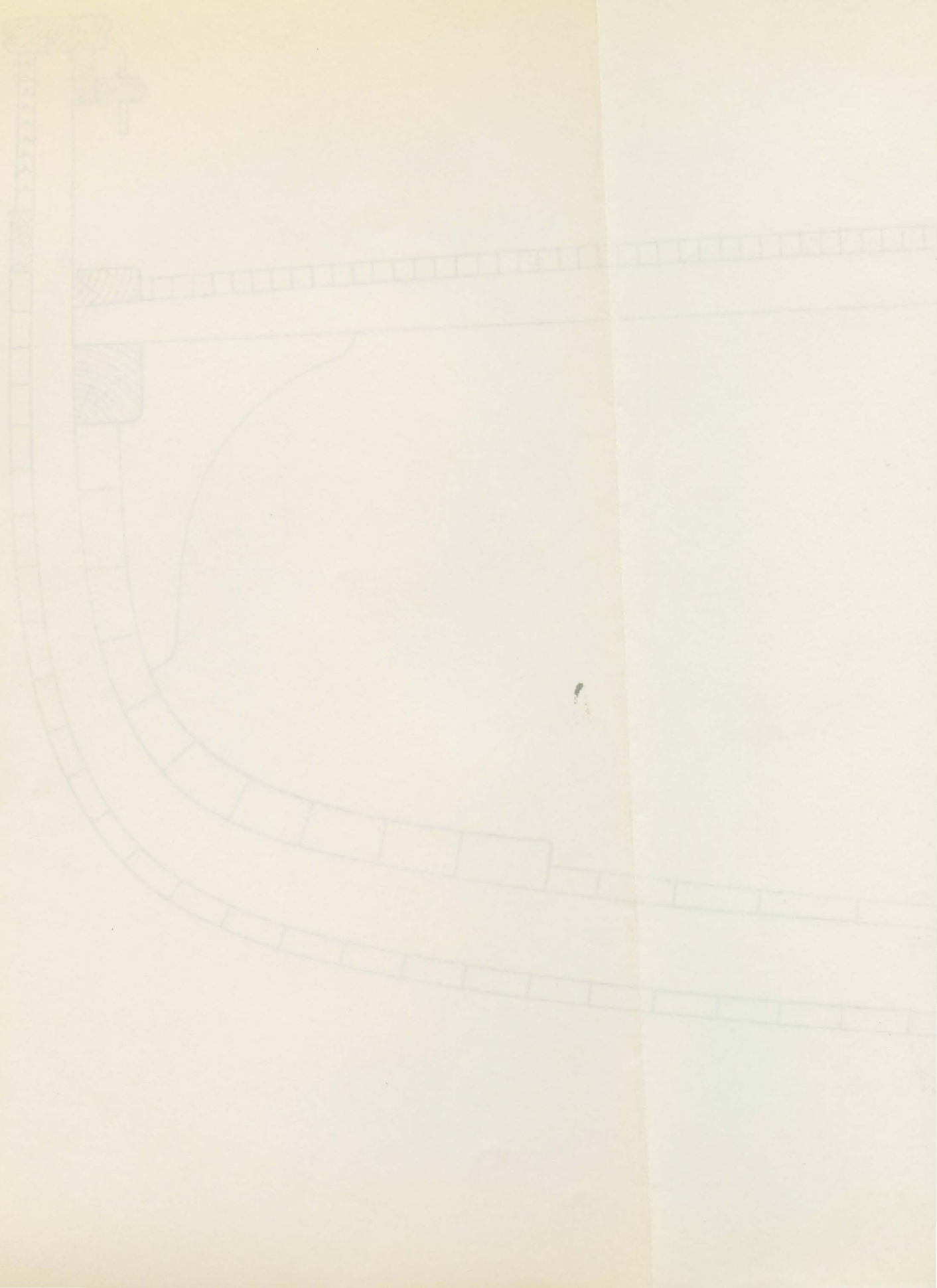












pitch in the seams, mixed up whiting and white lead.

The roof of the THAYER's cabin may have been painted, although it could well have been oiled and have had white seams. The interior of the hold should be well oiled.

Mr. Matthews was very interested in the wharf borer problem on board the C. A. THAYER. In his experience he had never seen a West Coast vessel before attacked by any similar beetle.

On the Construction of the C. A. THAYER

The beams run through to the frames. The clamps are about 10" thick, probably. Above the clamps you can see there is a filler piece between the knees which is called the "chock." Between the salt shelves and the covering board the frame bays are completely open. Salt shelves are almost useless in the vessel because after a few years all the salt is gone, and then the shelf does nothing more than restrict ventilation.

When Matthews built Freeman's steam schooner DAISY GRAY in 1922 he told Freeman, "There's no use putting salt in there -- air is the best wood preservative there is." Mr. Matthews takes a favorable view of putting preservative gel material into the frame bays above the salt shelves. Above the chock between the beams there is a little opening for air.

In the case where the knees do not come on frames, there is a filler piece between the ceiling and planking which the knee is bolted through. The frames in the THAYER are double-set side by side. Generally it was the after frame which was carried up to the bulwarks and was known as the stanchion frame. The chocks between the bulwark stanchions

show evidence of having been repaired at one time or another. The pieces do not look original.

In Mr. Matthews' system of framing, the stanchion frame was the aftermost of each pair of frames. The THAYER's frames are 10", which leaves a 10" space between each pair of frames.

SECTION II

THE C. A. THAYER AND THE NORTH PACIFIC CODFISHERY

Introduction

The Bering Sea Codfishery

Captain John Grotle

The Pacific Coast Codfish Company

"Codfish" Thomasen's Narrative

INTRODUCTION

The three-masted schooner C. A. THAYER began her career in 1895 as a typical West Coast bald-headed lumber schooner, and she served the E. K. Wood Lumber Company well in this capacity until 1912, when she was sold to Peter Nelson, a packer of salted salmon. Thus, as was the case with many of her sisters, she embarked upon a second career during her later years, after age and competition from the ever-growing fleet of steam schooners had made her a comparatively uneconomical carrier in the coastwise trades.

Between 1912 and 1924 she made annual voyages to Bristol Bay, carrying fishermen and supplies north for the summer season and bringing men and the year's salmon pack back to San Francisco each fall. Then, when she was thirty years old -- a fairly ripe age for a West Coast sailing schooner -- she was sold again, and began a third career that was to keep her "alive" another twenty-five years.

The THAYER made her first codfishing voyage in 1925, and between that date and 1950 made a total of twelve half-year-long trips to the Bering Sea. Her career as codfisherman was marked only by the drama that was commonplace to the Bering Sea Fishery, and she is outstanding in this trade only in that she survived to become the last active codfishing schooner on the Pacific Coast.

HOME FROM THE NORTHERN SEA

The C. A. THAYER towing up to Poulsbo
at the end of the 1948 season . . .

THE BERING SEA CODFISHERY

Development of the Fishery

Codfish Packers

Nature of the Fishery

Jimmy Crooks' Narrative

Incidents in the Bering Sea

Decline of Codfishing

C. A. THAYER's Codfishing Career

Bibliographical Note

THE BERING SEA CODFISHERY

Development of the Fishery

The North Pacific codfishery is at once the most venerable and unimportant of the commercial fisheries of the Pacific States. The bright promise of the fishery at its inception went unrealized through eighty years of more or less diligent pursuit of the cod by fishermen and speculators alike, and the last decade has witnessed the quiet death of an industry which was as notable for its uncertainty in growth as its tenacity in decline.

The Pacific Cod is almost identical to that of the North Atlantic and (at least in the past) appeared to be very nearly as abundant, ranging over thousands of square miles of banks around the Alaska Peninsula, in the Bering Sea, and in the Sea of Okhotsk. The fish was observed by the early navigators of these northern seas, but it was not exploited commercially until Captain Matthew Turner outfitted his brig TIMANDRA for an expedition to the Gulf of Tartary in 1863.

Matthew Turner had sailed to the Amur River with general cargo from San Francisco in 1857 and 1859, and during both voyages his crew had hooked codfish for the galley pot. The canny Turner shipped 25 tons of salt before sailing for the Amur in '63, fished for a few days after leaving Nicolaevsk on his return trip, and landed the first load of salted Pacific Cod on the San Francisco waterfront. The next year he sailed to the Gulf of Tartary with the sole intention of fishing, and his success led to the outfitting in 1865 of six San Francisco schooners for the Okhotsk.

Turner himself sailed the schooner PORPOISE to Alaska and secured a good catch on the Shumagin Bank.

The pioneer of the Pacific codfishery soon departed the budding industry to engage in other ventures and his ultimate claim upon the intentions of the maritime historian rests upon the less dubious distinction of launching some 228 wooden hulls from his Benicia shipyard during the latter part of the 19th century. Among the ships he built were some which entered the codfishery, such as the W. H. DIMOND, JOHN D. SPRECKELS, and the handsome GALILEE, which had been designed for the coastwise and offshore cargo trades.

Neither the brig TIMANDRA, first of the codfishermen, nor the C. A. THAYER, last of the fleet, nor any of the sailing vessels used in the fishery between the late '60's and 1950 were constructed for the purpose, as were the codfishermen of Gloucester and other New England ports, for the conditions of the North Pacific fishery required vessels of rather large capacity suitable for a single annual voyage of five to six months' duration. The available supply of antique coastwise sailing vessels was always adequate to the demands of the codfishery, and it was only in the case of a few power (or sail-and-power) craft designed to support shore stations that special craft were constructed.

The high prices which salt cod brought on the San Francisco market in the late '60's led to a very rapid expansion of the industry, for the investment was low and the potential profit from a successful expedition was high. In 1870 twenty-two schooners schooners, barks, and barkentines sailed for the Okhotsk Sea or the Shumagin Islands, returning in the fall with almost a million and one half salted cod. The entirely speculative nature of these ventures is indicated by the rapid decline of the fishery in

the years immediately following: in 1872 six vessels brought in one catch one-fifth as large as that of 1870, and it was not until 1876 that a second boom hit the industry, only to be followed by another decline in the late '80's which was partially compensated for by the development of the Alaskan shore fishery.

Codfish Packers

The codfishing fleet was based entirely upon San Francisco until after 1890 and the type of businessman generally connected with the industry during these early years has been well-described by C. P. Overton of the Union Fish Company:

> Undoubtedly the most picturesque figure in the whole line (of codfishing speculators) was Nick Bichard. A native of the Isle of Jersey, a pioneer shipowner and merchant of San Francisco, he accumulated a fortune during the days of the Civil War and was early in the codfish business with quite a fleet of old vessels, both large and small, and for many years he was a prominent factor in the business. A large, swarthy man, erratic in speech and action, mixing codfish, coal, lumber and junk, keeping most of his books in his head; never knew what his cargoes cost him nor what they sold for. The codfish business absorbed more and more of his capital; then his real estate, two fine water lots on Steuart Street, the gore lot at California and Market Streets, and other property went the same way; the old vessels wore out and were lost and he finally died peacefully in the night of heart failure, leaving barely enough to bury him.
>
> Chief among the old-timers and of those most largely interested in and longest in the business was the firm of Lynde & Hough, two enterprising yankees of the old school who started in Sacramento in pioneer days, came down to San Francisco, were in the commission business (in 1865) itself after selling codfish on commission. They were for many years among the heaviest operators in codfish, and in addition, they dealt in all other kinds of salt fish, cornered the honey market, dipped into sealing in the Straits of Magellan, South Sea Island trading, fishing and trading stations in Alaska, salmon fishing, freighting, running a coasting passenger steamer, and anything else that promised a dollar, including "Okhotsk Sea Cod Liver Oil" and "Dr. Fisherman's Lotion for Man and Beast". They and their surviving partner, L. E. Noonan, were well and favorably known from Alaska to South America and from Hawaii to Australia and the Orient. Their last venture was codfish mixed with mining, and finally both of the

> senior partners died, leaving no money but various debts behind them. Their location at California City was sold to the U. S. Navy Department for a coaling station, and their various vessels and codfishing business were merged in the Union Fish Company.
>
> L. E. Noonan was connected with the Lynde & Hough Company for nearly 40 years, at first as general factotum and handy-man-ready-for-anything. He ran the fish yard, outfitted the vessels, hired captains and crews, packed and re-packed salmon and mackeral, bought and sold on the street. Later he acquired an interest in the firm and being of a more thrifty disposition and not interested in the mining, he was enabled to retire with enough to permit him to take a well-earned rest.

The shoe-string investment necessary to participation in the codfishery was naturally one of the more important reasons for the speculative nature of the business during a large part of its history. Yet while the capital outlay for an old schooner, for dories, food and fishermen's supplies was comparatively small in relation to the potential return, it still amounted to several thousands of dollars, and committed the investor to a half-year's expedition which would return, with even average luck, something between one-twentieth and one-fifth of the annual catch of codfish.

The desire to realize the quick profit often resulted in the production of an inferior product, particularly during the early days of the fishery, which did little to establish the reputation of the Pacific codfish in competition with the Atlantic cod. This, combined with the superior marketing position of the older industry, tended to place a "ceiling" on the Pacific fishery which was limited to the available demand of the Pacific states, the Pacific Coast of Central and South America, Oceania, and the Orient. In each case the competition of the Atlantic product was felt, and in the last the Japanese entered the field before the turn of the century. But so long as a firm basic demand for salted cod existed in the Western United States the existence of the fishery was guaranteed -- if the hopes

of the speculator might be disappointed -- and each year the aging schooners sailed 1,500 to 2,000 miles from San Francisco and Puget Sound to the Aleutian and Bering Sea banks.

Around the turn of the century and shortly thereafter, the cod-fishing industry began to fall more and more into the hands of more stable companies, corporations which invested comparatively heavily in the business and therefore were of a less speculative nature. Instead of selling loads of salt fish to jobbers once they were landed on the wharves, these substantial outfits erected processing plants, and handled the fish from the bottom of the Bering Sea through the post-season processing, packaging, and wholesale jobbing phases. The Union Fish Company of San Francisco was formed in 1898 from a combination of the McCollan Fishing & Trading Company, and Lynde & Hough interests; initially it served primarily as a marketing agency, but soon it developed into a full-scale operator, and until the middle 1930's its fleet of sail and power vessels, its Alaskan shore stations, and its plant on Belvedere Island were important factors in the industry.

The Alaska Codfish Company of San Francisco was a large operator through the '20's and on Puget Sound several long-lived outfits developed, notably the operations centering around Captain J. A. Matheson, the Robinson Fisheries at Annacortes, and the Pacific Coast Codfish Company at Poulsbo. The Pacific Coast Codfish Company was organized in 1911 and sent its last schooner, the C. A. THAYER, on her final voyage to the Bering Sea in 1950: its operation may be considered fairly representative of the salt-codfish industry from the date of its founding through the demise of the American codfishery in the Bering Sea.

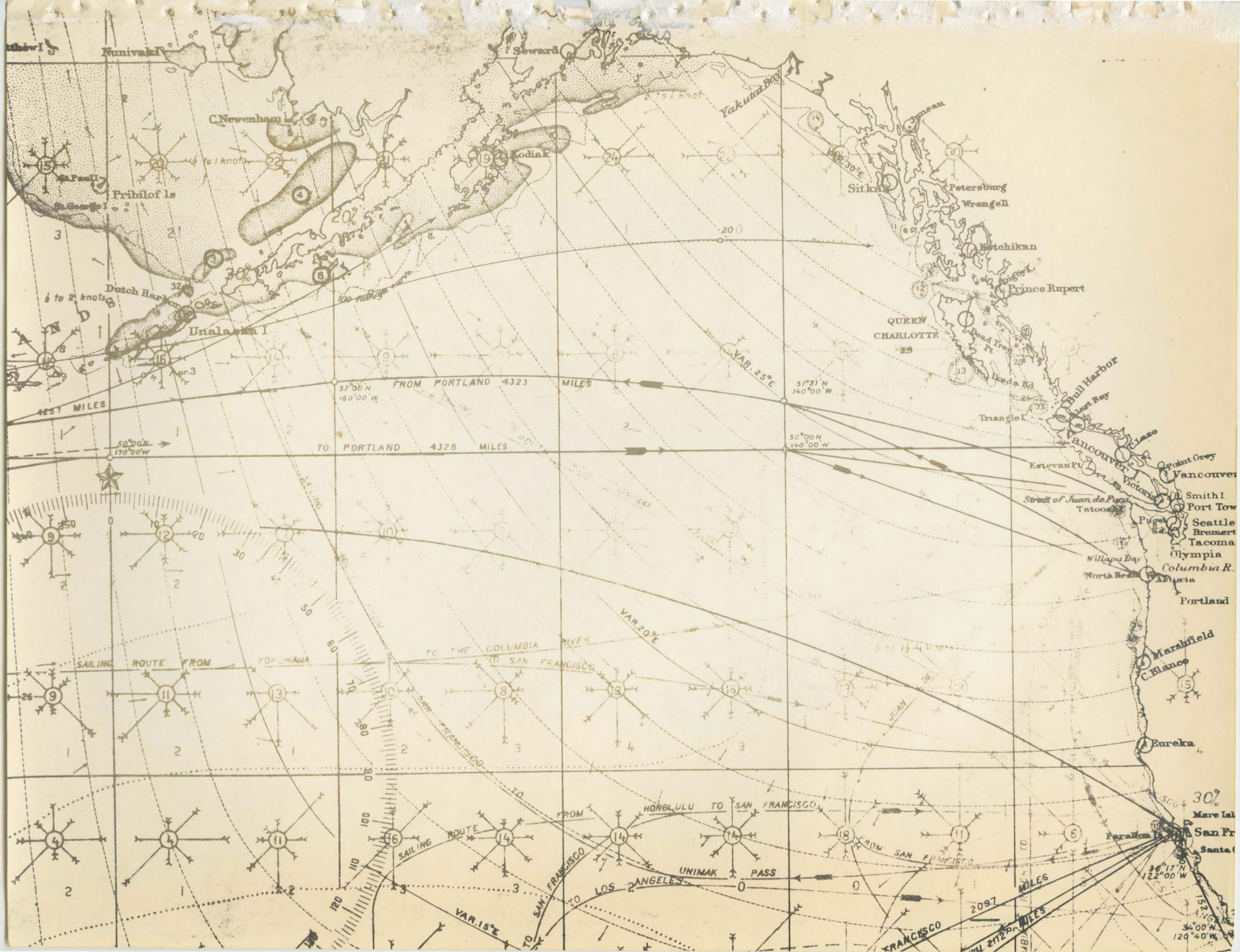
The guiding spirit of the Pacific Coast Codfish Company was J. E. Shields, who was part owner from the inception of the company and became

sole owner in 1928. At Poulsbo, Washington, the company erected its wharf and plant, where its schooners were laid up in the winter, and where the fish were processed during the off-season. Starting with the purchase of the three-masted schooner JOHN A. in 1911, the company later bought and operated at one time or another the CHARLES R. WILSON, MAID OF ORLEANS, C. A. THAYER and the big four-master SOPHIE CHRISTENSON.

Nature of the Fishery

The codfishing year began shortly after the first of April, when the one or two schooners in current operation departed for the Bering Sea. Most of the fishermen were local residents and returned to the same ship year after year; the same skippers stayed with the company -- John Grotle went north each season for twenty-three years; only the lower-paid members of the dressing gangs were generally not "old timers." When the ships returned, generally in September, with the season's catch, the salted fish were transferred to brine tanks and the processing plant would go into operation. The cod were removed from the tanks as needed and dried on racks under controlled conditions, and then were generally either skinned and boned and put up into a brick-like package or put up whole. The peak years of Pacific Coast Codfish Company production came in 1940 and 1941 -- after Shields had out-lasted most of the competition -- when about 1,000 tons of cured fish each season kept the plant running full tilt through the next year's sailing date.

The colorful and crusty J. E. Shields earned the possibly unique distinction of becoming a seaman who had never served in any other capacity but master, and he commanded the SOPHIE CHRISTENSON or C. A. THAYER on ten voyages to Alaska between 1933 and 1948. His outside


Nunivak I.
Seward
C. Newenham
Kodiak
Yakutat Bay
Juneau
Sitka
Petersburg
Wrangell
Ketchikan
Prince Rupert
St. Paul I.
Pribilof Is
Dutch Harbor
Unalaska I
QUEEN CHARLOTTE Is
Dead Tree Pt.
Bull Harbor
Hecate Rd
Triangle I.
Vancouver
Point Grey
Estevan Pt.
Victoria
Smith I.
Port Tow
Strait of Juan de Fuca
Tatoosh I.
Seattle
Bremert
Tacoma
Olympia
Willapa Bay
Columbia R.
North Head
Portland
Marshfield
C. Blanco
Eureka
Paralion Pt.
San Fr
Santa
VAR. 25°E
VAR. 20°E
VAR. 15°E
FROM PORTLAND 4323 MILES
TO PORTLAND 4328 MILES
4257 MILES
52°00'N 160°00'W
51°21'N 140°00'W
50°00'N 140°00'W
50°00'N 170°00'W
SAILING ROUTE FROM YOKOHAMA TO THE COLUMBIA RIVER
SAILING ROUTE FROM SAN FRANCISCO TO HONOLULU
SAILING ROUTE FROM HONOLULU TO SAN FRANCISCO
SAN FRANCISCO TO LOS ANGELES
UNIMAK PASS
2097 MILES
36°17'N 122°00'W
34°00'N 120°40'W
30%
20%
4 to 1 knots
2 to 1 knots
½ to 2 knots
100 fathom curve

NORTH PACIFIC COD BANKS . . .

The codfishing areas to which reference is made on subsequent pages appear on this weather chart of the North Pacific for July, 1925.

The banks around the Alaska Peninsula, Bristol Bay, and the Bering Sea are shown as the dotted areas in the northwestern portion of the map.

The circled numbers indicate some of the more famous banks "8" (south of the Alaska Peninsula) is Shumagin Bank; "3" (just north of Unimak Pass) is Slime Bank; and "4" (reaching into Bristol Bay) is Baird Bank.

interests were generally confined to shipping and salt, which mixed better with codfish than honey and mining.

But as a story of entrepeneurial triumph, the history of an unimportant commerce has its limitations and the fishery itself is of more interest than the industry. Each year for eighty-seven years ships and their crews sailed to the far northern Pacific, and at least until the late 1920's, when outboard motors were finally employed to power dories, they practiced an ancient trade in a most antique fashion.

One of the best accounts of the men, the conditions, and the techniques of the Bering Sea fishery has been drawn in a narrative by Jimmy Crooks, and appears below. Crooks was no codfisherman, and the rigors that were routine to many of his shipmates left a vivid impression on his memory:

Jimmy Crooks' Narrative

On April 13, 1926 at Seattle, Washington, I signed on as a fisherman on board the schooner FANNY DUTARD for a voyage to the Bering Sea, Alaska, to engage in codfishing. The FANNY was a three-mast, gaff topsail schooner of 252 net tons built by C. G. White of San Francisco in the year 1882, and at that period of time registered at the port of Anacortes, Washington.

The FANNY DUTARD was manned by a master, navigator, twenty fishermen, one cook, one messman, two fish splitters, two salters, and two headers, whose duty consisted of whacking the fish on the back of the neck with a heavy knife to sever the bone and then with a professional twist to yank the head right off the fish.

The master and the fishermen were compensated on a percentage

basis according to the weight of the fish caught during the season, and did not receive any base wages. The navigator and other members of the crew were paid monthly wages and in addition were paid for any fish which they could catch over the schooner's bulwarks during their spare time.

Insofar as the master and the fishermen were concerned, the entire voyage would be a gamble as the weather in the Bering Sea is mainly unpredictable, and in the event that the schooner or the cargo of fish were lost, they would receive no compensation at all. Of course, in such a case the owner of the ship would only be losing a leaky old schooner of little or no value and a few hundred sacks of salt, while the fishermen, if they were lucky enough to survive, would arrive in the United States destitute after perhaps five months of hard and dangerous work.

The FANNY, one of the smallest vessels in the fleet of nine schooners, was one of the fastest and best sailers. Unlike most of the other schooners in the fleet she carried topsails, while her standing rigging was set up with tarred hemp rope and deadeyes rather than with modern steel turnbuckles. Everything was done by hand on this vessel and there was no auxiliary power to assist in launching or taking the twenty dories on board, or in handling the vessel's sails.

Under my contract as fisherman I was not entitled to any base wage, but would be paid at the rate of one and a half cents a pound for the fish that I caught -- that is, after the fish were cleaned, salted, and, of course, the head and backbone removed, and provided that the fish were delivered safely in the United States. It soon became obvious that I would have to catch one hell of a lot of fish to even make wages corresponding to the lowest paid laborer on shore, and that the story which the owner of the vessel had painted for me before I signed on was a bird of a different colour. Had

I inspected the vessel before signing the Articles of Agreement, it is doubtful if I would ever have made the voyage at all, but a crafty shipowner had taken that into consideration, and like all newcomers to the industry I was not taken aboard until after the vessel had been hauled away from the dock by a small tow boat and there was no way to return to shore. The launch which carried me out to the schooner where she lay temporarily at anchor did not linger alongside the vessel, but returned to the shore immediately in case somebody might change his mind. However, there was some delay before the schooner departed while the owner negotiated with the local police authorities to have some skilled cod fishermen released to make their annual voyage to the cod fishing grounds in the Bering Sea -- a not unusual delay, I was to learn at a later date.

It was a hard drinking lot who manned these vessels, and it was only natural that the bootleggers assisted the owners to get their customers out of jail in order that they could make another voyage to the Bering Sea and make enough money to pay their booze bills and start out on another prolonged spree upon their return. In fact, arrangements were made with the bootleggers to provide them with enough moonshine to keep them soaked until the vessel was approaching the northern fishing grounds, and bootleggers were always conspicuous around the docks upon the arrival or departure of a codfishing schooner. For a person to make a second voyage on one of these schooners it would be almost necessary for him to be under the influence of liquor, and life in a city jail could not have been a milder form of punishment than life on board a Bering Sea codfishing vessel.

Eventually the last group of drunks were brought on board and all hands (who were sober enough) assisted in heaving up the anchor, one link at a time. The anchor windlass, like the bilge pumps, was manned by hand, and while four men manned the windlass pump handles two more men kept

the anchor chain in the center of the windlass barrel with clouts from long handled sledge hammers. When the anchor was safely stowed to the cat-head, a tow line was passed aboard and made fast and we were off to the Bering Sea.

Only a short way down Puget Sound from Seattle we were favored with a fair wind and we shook out all our sails and cast off the tow line and we were off on our own on a voyage which was to last for a period of four months and eighteen days under conditions which could have been little different from those encountered a century previous. The master, navigator and two fishermen who acted as first and second mates were quartered aft under the poop deck, in small cubby-hole like rooms no larger than the cages furnished for animals in the Zoo. They ate their meals at a table in the ship's galley together with other fishermen, and there was little to show that they were officers, inasmuch as they slept on the same type of straw mattress as the other men. The shipowner, however, had seen to it that the dignity of the master should be upheld, and to show esteem provided him with a private water closet, or rather waterless closet. This was the only private place on the vessel; it was of the sentry box type, a one-holer, and in order to flush it a bucket with a lanyard was provided to haul the water up from the sea, although when running before a heavy sea the master on several occasions got well flushed when the sea came up through the hole without any warning. In spite of the fact that the vessel had a complement of thirty men there was no water closet provided for their use, but if a man were acrobatically inclined and wished some privacy he could crawl out on the jib boom ahead of the vessel and obey the laws of nature while he sat with his feet on the footropes and held on with one hand. This was the favorite perch throughout the voyage, and several men barely escaped with their life when the vessel took an unexpected dive

and dunked them.

The splitters, salters, headers, cook and messman were quartered in a small house on the main deck cramped together like sardines in a can with a small coal burning stove to furnish heat in extremely cold weather. The ship's galley was also located in this house. The fishermen were quartered down below the main deck forward in the fore peak. In this dismal dungeon there were no port holes to admit the light of day, and two cheap kerosine lamps furnished the only illumination twenty-four hours a day. Twenty wooden bunks were built three high right up against the schooner's hull, and the only ventilation provided was through a scuttle which had to be kept closed during heavy weather. To make matters even worse, a huge pot-bellied stove an an anvil were set up between the rows of bunks. The stove was used not only to heat the quarters in cold weather but also to heat iron before it was beat into gaff hooks, and to melt lead for sinkers.

On the voyage north these quarters became a beehive of activity. Night and day everybody seemed to be busy. Lead was cut into pieces, melted down and moulded; sheet copper was cut into strips for spreaders for the fishing hooks, and after being drilled, swivels were riveted onto them on top of the anvil. Men stripped the bark of green saplings and made masts and booms for their dories and some made jibs and foresails according to their own specifications. Reels for the hand fishing lines were carved from wood, and wood lunch boxes, gaff-hooks, and small wooden windlasses for the dories were manufactured from the rawest of material. Handlines were soaked in buckets of brine and fishing hooks secured to the spreaders after the points were filed as sharp as a needle. This and all the work of getting ready to put out the dories and start fishing was performed right here in the sleeping quarters. It certainly was anything but

a place to rest, even if a person could adjust himself to the noise of tinkering and hammering, for there were other things even worse to contend with: the quarters were infested with bedbugs, fleas and body lice, and the stench of rotten fish from previous voyages penetrated through the flimsy bulkhead separating the quarters from the cargo hold where the fish were salted and stored in bulk. Stinking bilge water was always ever present under the floor, where coal for the stoves was carried.

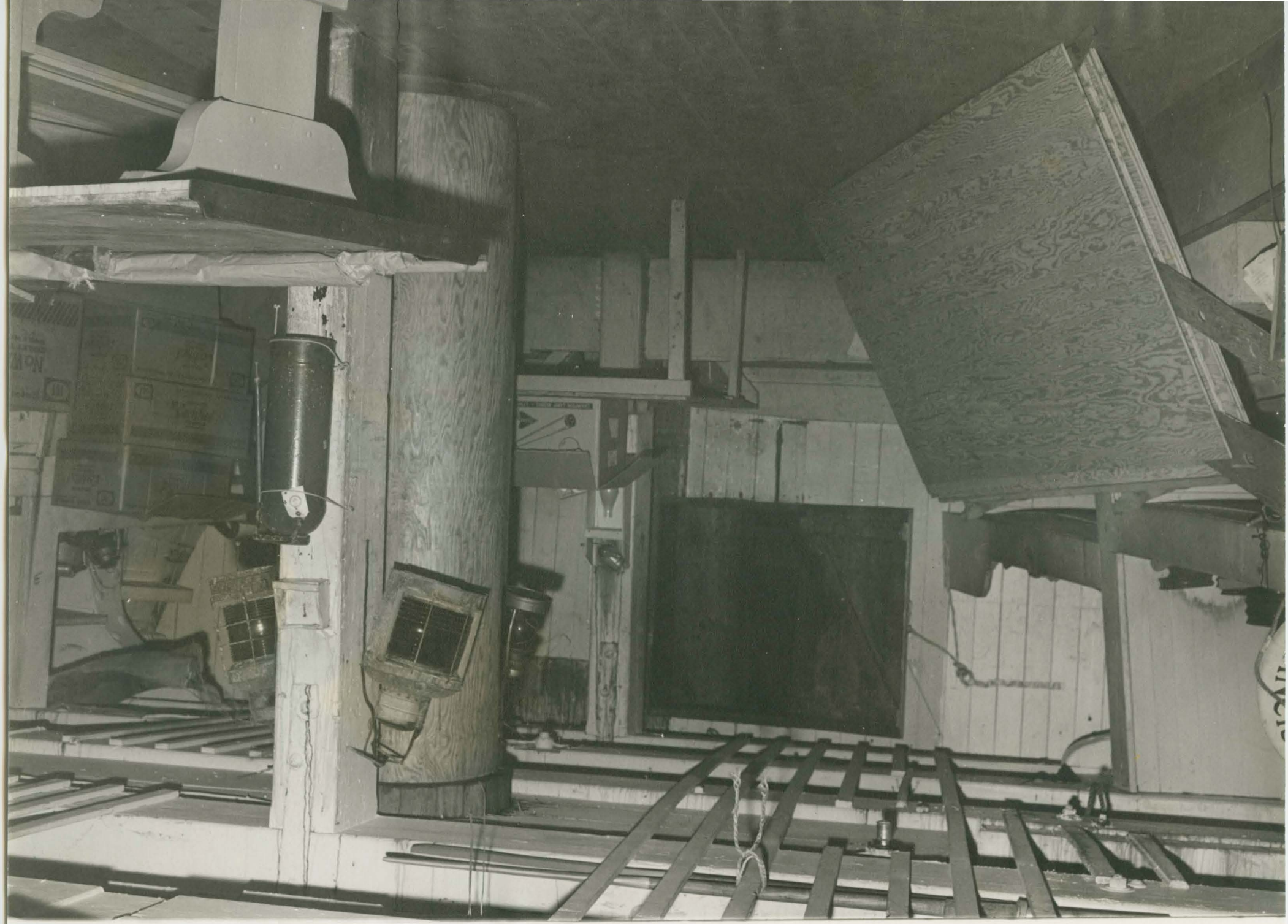
No bed linen adorned the coffin-like pine bunks; neither did the bunks contain such modern contraptions as bed springs. Those who had purchased moonshine instead of blankets were now sweating it out and paying the fiddler, for they slept with their clothes on their back, and their shoes on their feet. Even the pot-bellied stove failed to supply enough heat to keep the bunks dry as they were against the vessel's damp hull, and to offset this uncomfortable and irritable condition at a later date when things became better organized and the drunks got over their hangovers, tar paper was tacked to the ship's side to divert the water and salt was hastily emptied from gunny sacks, and the sacks sewed together as substitutes for blankets. Lines criss-crossed this stinking glory hole, and upon these lines wearing apparel both wet and dry was draped, and what was left of the remainder of our worldly goods was stowed in the bunks. Bundles of clothing substituted for pillows in many cases, for the grateful owner had not provided one single clothes locker or inch of space for his humble employees.

It is true that the owner, out of the goodness of his heart, had provided a mattress for each bunk -- a long burlap sack stuffed with straw, and referred to as a "donkey's breakfast", but even this gesture of good will was empty, for the mattresses were infested with bedbugs, fleas and lice of previous voyages.

FISHERMEN'S FORECASTLE OF THE C. A. THAYER

The THAYER's forecastle offers what appears to be rather spacious accomodations, but it must be remembered that she also carried more men than did the FANNY DUTARD.

The clutter of gear and materials visible in this photograph, taken in May, 1960, does not begin to match the accumulation described by Jimmy Crooks, and it will be a difficult problem to recreate the atmosphere described by him for display purposes.



To add to the stink of the cramped and damp quarters were the unwashed bodies of a score of men, for there was no such thing as a washroom on the vessel for officers or crew. Even if space had been reserved for a washroom it would not have improved conditions as only one bucket of water was allocated each day for the use of the entire crew for hygienic purposes. Never in my life have I seen a forecastle on board ship which looked so much like a hobo's jungle; in fact, it is possible that no jungle smelled so bad, for after all, the "Knights of the Road" had always access to fresh water and an opportunity to keep reasonably clean. The hold of a slaver could not have been much worse than the quarters I found on the schooner FANNY DUTARD during the year 1926.

The backbreaking work of manning the bilge pumps every watch disclosed that the vessel was leaking considerably. I was at a loss to understand why no attempt had been made to caulk the seams before we departed, until the fishermen explained that such a condition tended to make the salted fish become lighter, and as the fishermen were paid according to weight at the end of the voyage the owner gained financially. As the fishermen were not paid any base wages, and the men on monthly wages were not paid for overtime work, no extra expense was incurred by the owner for this operation. During the fishing season, when the fishermen were manning their dories, the salters, splitters, and headers took care of the pumping. On the return voyage to the United States the fishermen resumed the pumping, and it took little persuasion to induce them to take their turn at the pumps, for they were faced with the alternative of either losing a certain amount of money by pumping or losing both vessel and cargo of fish if they failed to keep her reasonably dry.

We dined right in the galley, where two pine tables with long benches on each side were set up to accomodate us, and were lucky to have one of the best cooks afloat. The owner had seen to it that we were well provided with an abundance of fresh meat, fruit, and fresh vegetables to fatten us for the hard work ahead of us. Carcasses of meat and pork were hung up in the rigging and nothing was spared by the cook. "Eat all you wish," was the cook's order, "for when it is gone there will be no more fresh food for the rest of the voyage." There was no way of keeping fresh food, and when it was finished we resorted to salt pork, salt beef, and dried and canned vegetables, supplemented by codfish, halibut, and flounders which we caught ourselves, and incidently the owner paid us no allowance for the fresh fish we delivered to the cook.

Fifteen days out from Seattle we arrived at Unimak Pass and sailed right on through the pass into the Bering Sea. The drunks had all got over their hangovers, and those who had been dining sparsely before they joined the vessel now had the wrinkles out of their bellies, and all were eager to reach the fishing grounds. Few men cared to sleep, for they had what is known to seamen as the "Channel Fever" (expectations ahead). Personally, my expectations were confined to how much longer I would have to wait before I could get in my dory and get away from the stinking surroundings. On April 30th we arrived at the fishing grounds well off shore from the coast of Alaska, and let go our anchor in forty-five fathoms of water and launched our dories.

It was a great relief to get away from the conditions existing aboard the schooner, and to no longer listen to a native of Finland play a monotonous dirge on a melodeon, over and over again, for the simple reason that it was the only tune he had ever learned to play. The noise he made on that

music box was no more soothing to the nerves than the hammering and tinkering described. While it is true that we enjoyed a feeling of relief that morning to leave the schooner in our frail craft, it is also true that we were not embarking on a picnic, for the weather was bitterly cold and a heavy swell was running, and we were engaging in one of the most dangerous and difficult occupations possible to find, and also one of the lowest in the matter of pay. Perhaps it was the feeling of independence which accounted for the change which took place this morning as we worked together to launch our dories, for once he cast off his dory from the schooner, each fisherman was entirely on his own. He was master of all he surveyed, and it would take all his skill and judgment to survive the months ahead of him. When the time came to fight for survival in the southeast gales that spring up in the Bering Sea almost without warning, there would be nobody to consult or seek advice from, and all that would count would be skill in seamanship and confidence in his ability to keep calm and be free from fear.

So far I have written about the schooner and conditions which prevailed on board, and only referred to the fishermen as men addicted to prolonged periods of heavy drinking; in fact, almost putting them in a class of alcoholics. While the description of that particular side of their life is true in most cases, there was another side of their character, and it didn't take me long to learn that the fishermen on this schooner were among the most skillful seamen I have associated with in a lifetime at sea. Also, they were the hardest workers and the most fearless men I have ever had the opportunity to see in action. A person had to be tough to survive alone for even one season, but to return year after year to this particular occupation he had to be absolutely immune to hardship and danger.

The fishermen who manned the Bering Sea codfishing vessels consisted of many nationalities. Many had experience as fishermen in other

parts of the world before they immigrated to the Unitied States, or had sailed the seven seas as merchant seamen, and the native-born American was in the minority, although there were a number who had experience as fishermen out of Gloucester and the eastern seaboard. The competition between fishermen concerning who would catch the most fish was greater than I have ever seen in any other industry.

The equipment with which each dory was furnished consisted of:

1 pair of oars
1 jib
1 foresail and boom
1 wooden bailer
1 four-inch compass
1 gurdy (windlass) with 120 fathoms of small anchor line
1 small stock anchor
1 pair of nippers (rubber bands used on hands to haul in fishing lines)
2 fishing lines with leads and fish hooks
1 bait knife
1 gaff hook
1 wooden lunch box
1 gallon jug of fresh water

All hands were called on deck each morning at 4:00 A. M. and after breakfast was served and each fisherman had packed his lunch box with a supply of food and filled his water jug, the dories were taken out of their nest and launched. Then the dories fanned out in a semi-circle and headed to locations far apart from each other astern of the vessel. Fishing was carried out with two hand lines, each carrying a heavy lead sinker and two fish hooks, one on each side of the dory, as the dory drifted with the tide astern of the schooner. Before the tide turned the dories would appear as mere specks far away on the horizon, and in some cases they could not be seen from the schooner at all. Each dory was capable of carrying approximately three hundred and twenty fish, and with that amount there would be only a few inches freeboard, and care would have to be taken to avoid swamping.

At times when a dory swamped with a load of fish it would go right down to the bottom and the fisherman had little chance to be saved. At other times they would float bottom up, and to provide for this situation each dory was fitted with a rope grommet rove through a wooden plug which extended through the bottom of the craft and afforded the fisherman a chance to hold on or to haul himself up onto the bottom of the dory until he could be rescued.

The swift currents at times prevented the fishermen from fishing with his anchor down, as the leads on the lines would not be heavy enough to get close to the bottom. This situation was solved by making the anchor line fast to the crown (bottom of the anchor) and as the anchor was fitted with a stock, it would hold the dory for short intervals and then let go. In this manner the fishing could be carried out as the dory drifted slowly with the current or tide.

While cod fish will bite at almost any kind of bait, at times they seem to be very impatient, and like some businessmen do not like to be kept waiting for food; unless food is kept handy they will depart from the vicinity. In order to not disappoint them, one fishing line was always kept in the water while the other was being hauled in and re-baited.

An experienced fisherman could bring a school of fish gradually from a depth of hundreds of feet right up close to his dory by gradually shortening his lines each time he hauled them in, and at such times it sometimes became unnecessary to even bait the hooks.

It was not always possible to heave up the schooner's anchor when caught in a gale of wind on a fishing bank sixty miles offshore from the coast of Alaska, and we would hoist a riding sail and ride out the gale. On one occasion we lay rolling almost on our beam ends and taking heavy seas

over the deck for five days. The seas prevented us from venturing on deck without taking heavy risk of being washed overboard, and down below in the stinking quarters at this time an addition to the misery caused by the bedbugs, lice and fleas was making matters worse. Before that gale had developed we had encountered a thick, heavy red slime in the water and as we hauled in the lines it coated them like glue, and wherever it came in contact with our bodies it burned like hell. Also, practically every fisherman on board had some salt water boils on his body.

The water was deep out on the Slime Bank (as the location was known) and to anchor we had out approximately 200 fathoms of old anchor chain. Under ordinary circumstances in good weather it would take us many hours of back-breaking work to heave the anchor up; after the wind and sea had reached a certain degree it was impossible to heave it up at all without heaving the schooner under. As a last resort it would have been necessary to slip the anchor and chain and leave it right there on the bottom if we decided to leave, and this would have meant the end of the fishing season, for it was the only anchor and chain the FANNY had, and it would have forced us to return almost empty to the United States, and, of course, practically broke. To leave this location would have been unprofitable under any circumstances, for the fish out in deep water were heavy and fat, while the fish caught in shoal water were skinny and light, and usually covered with lice and full of worms.

Up on this lonely sea the only company we had in fair or foul weather was the seagull, and an occasional school of whales whose company we certainly did not appreciate, when they would cause us alarm when they playfully would circle around our dories and sometimes come up almost underneath us.

Thousands of seagulls were always present at the schooners when the fish cleaning operations were in progress and the noise they made assisted us in locating the schooner when visibility was poor.

By some means the gulls seemed to know when we caught a small fish on our lines, and they would arrive at our dory just in time to grab the fish when we threw it back into the ocean. (According to our contract we did not take any fish under eight inches in length.) Some gulls became very tame and adopted individual dories and it was not unusual to have one hitching a ride on the end of the boom, or when cutting fish for bait to have one reach out and help himself to tidbits which he fancied. Perhaps the tolerant attitude assumed towards the seagulls by the crew was in accord with the rule that misery likes company.

While fishing later on in the season in the vicinity of the Unimak Pass we had a natural barometer to warn us of approaching storms in the form of an active volcano, and we always kept an eye cocked on this particular landmark and as soon as top showed clear we would haul up our anchor and fishing lines and with all speed start back for the schooner.

Another warning which usually could be relied upon when bad weather was approaching was that the codfish we caught would contain an unusual amount of small pebbles in their stomach, or when we would continually catch halibut on our lines.

During the early part of the fishing season there was almost twenty-four hours of daylight each day. The weather was cold and invigorating, and men worked until they were almost exhausted. Some fishermen made two or three trips each day and returned to the schooner to eat, and after a very short rest they would immediately set out again after more fish. Some men would be lucky and secure several boatloads of fish in a day, while others

came back empty, but as long as the weather was cold they kept trying without protest, and in spite of the disappointments. It was tough to work like hell and just when you had your dory loaded and were ready to return and deliver your fish, the wind would change; start blowing, and you would be forced to dump your load and be lucky to get back to the vessel empty. Then perhaps you were miles away from the schooner and were lucky and got a load of fish, when suddenly a heavy fog would shut off all visibility, and you might be days sailing around or using your ears and not be able to locate the schooner, and eventually having to dump your fish overboard.

Then, when the mountainous seas and wind would not permit your reaching the schooner, or when at times you got to within a few hundred yards of it and try as hard as you could, you couldn't get any closer -- even when at times a life buoy attached to a line was put out over the stern of the schooner and drifted with the wind or current towards you, and when maybe you were within a few feet from reaching it, you had to give it up and perhaps it was several days more you sailed around with a pocket handkerchief of a jib sail to steady your dory and make it possible to steer until you were forced to eat the raw fish in your boat. Then when you eventually reached the schooner and you and your dory were scooped out of the water by eager hands who had been helpless to do more than they had to assist you -- then this was the time you said you were through with such a life forever.

But as soon as you had a rest and the weather moderated, you were ready to start in again, and a few days later, at 4:30 A. M. you were hauling at the dory halyards which were stiff with brine, and your blistered hands protested, and minutes later you were back in your dory to once more try your luck, hoping that this time you would not be so long in returning on board.

Then there were a few new at the game who worked harder than most but who, for some reason, could not catch fish although they jigged and jagged their lines; they might as well have had the hooks put on backwards. Some people said they had poison in their hands and the fish knew it, and they pulled with their oars from one location to another, trying as long as the weather was cold, always expecting to get a load of fish, but never succeeding. As the season advanced the weather became oppressively warm and few showed much interest in their work or went far away from the schooner in search of fish.

The contract stipulated that the fishermen be called each morning at 4:00 A. M. and that they launch their dories and go fishing each day, provided that the weather was suitable, and to refuse would be to incur a fine, etc. Reluctantly now these orders were carried out in the slow moving manner, and when a short way from the schooner some would drop their anchor and go to sleep. Then others would simply let their dory drift with the tide while they slept, and others by the binoculars could be seen delousing themselves. At this period of the season the lice, bugs and fleas became more lively, and the salt water boils more numerous, and during the heat of the day the stink was terrible. Little or no fish were being caught, and we were running short of fresh water. It was now two and one half months since anybody on board had had a bath or washed their clothing and the master announced that we would now heave up anchor and proceed to the mainland where we could replenish our water tanks and indulge in the luxury of a bath. It was really something to look forward to and all hands turned to with a will and we hove up anchor and shook our sails out, and headed for a small cove on a practically uninhabited section of the Alaskan Coast.

When we located the cove and came to an anchor we launched all the dories and pulled them right up into a small fresh water creek and washed them out, using sand instead of soap, for soap cost money, and the owner did not provide soap. Fires were built with driftwood and like hoboes in the jungle we boiled out our clothes in buckets and tin cans and bathed our bodies and scrubbed them with sand, and beat the lice in our clothing to death between rocks in the creek banks. Using the wooden bait buckets (which were used as chamber pots in the dories) we filled some dories with water while others towed them out to the schooner.

This was a great day in the life of a Bering Sea cod fisherman, and we returned on board with clean clothing, temporarily deloused, and returned to the fishing grounds closer to the Unimak Pass than our previous location and also closer to the mainland of Alaska. But the relief we felt was only temporary, for within a few days we were just as lousy as ever, and would have to wait until the fishing season was over before we would repeat the operation of replenishing our water tanks and having another bath.

As the season advanced we varied our method of fishing, and when the wind was favourable the schooner would occasionally sail down and pick up the dories. This procedure saved us a lot of work, but the prevailing southeast winds had no mercy on us and for days at a time we would be unable to get back on board the schooner. Several men became ill during the voyage, but there was no medicine chest on board, or any person qualified to take care of them. It was no place for a sick person, and one fisherman decided that he had enough and after securing a meagre supply of provisions and a few gallons of precious water he deserted the schooner fifty miles offshore. Later on we learned that he had been adrift for fourteen

days before he reached a native habitation on the Alaskan Coast. He had encountered bad weather and fog, and had used up all his food and all his water before he succeeded in getting help on shore. The only consolation he received for his narrow escape was that he forfeited the fish he had struggled so hard to catch before he deserted the vessel.

It was not unusual for fishermen to desert when conditions became intolerable, and fourteen out of twenty fishermen from the FANNY DUTARD had refused to go back on board ship on a previous voyage. They had been rescued by a Coast Guard Cutter and taken into an Alaskan port, after being at the mercy of a gale for many days. They preferred to forfeit everything they possessed, including the fish they had caught, and return penniless to the United States sooner than return to the vessel and the stinking surroundings.

On one occasion during the entire season a doctor from a Coast Guard Cutter came on board and spent a busy day lancing boils and giving first aid. This doctor did not linger any longer on board than was absolutely necessary, and was evidently relieved to get away. Once during bad weather I managed to seek refuge on board a cutter, but I insisted in sleeping in my dory and refused the luxury of sleeping in a bunk offered me for fear I would louse up the bedding.

Strange as it may seem the vessel was also infested with rats, although there was no way in which they could obtain fresh water. It was evident that the rats were able to extract fresh water from the fish in the vessel's hold, and before the vessel eventually returned to Anacortes there was a covering of inches of rat droppings over the entire cargo of fish.

Several fishermen contracted fish poison and recovered, but I was not so fortunate, and before the season ended I got it and suffered terribly.

It happened that while we were moving to a new location and were engaged in taking a reef in the mainsell that I fell off the boom and the point of a fish pew, one of a number stowed in a barrel beside the main mast, went right through my finger. There being no such thing on board as iodine or other antiseptics, or even a surgical bandage, the master applied a covering of fishermans' plaster to the injured finger. In a few days' time it festered and the only remedy left was to soak the injured hand in a solution of Epsom salts and water. The accident occurred while the vessel was far offshore and abeam of Port Moller, where a salmon cannery was located. For ten nights and days I suffered while the fish poison spread up my arm to my neck. Rest was impossible and I paced the deck night and day until eventually I became delirious. Fishing at this time was good, and it was obvious that the master was only interested in the profit to be made for himself and the owner of the vessel. It was not until it was certain that I would die unless given medical attention that any steps were taken to get me on shore, and not until the fishermen demanded that the master bring the schooner close in shore so that I could be landed. Their demand could not be put into action when a dead calm set in, and the problem was solved when two fishermen volunteered to row me in to Port Moller in a dory, a distance of approximately sixty miles.

I have a faint recollection of being lowered into a dory and little else until I arrived at Port Moller. What I do remember, and what I will never forget, is standing before the doctor at the cannery with a hand like a ball of puss, and wrapped in an old piece of shirt, and the fact that the doctor would not give me any medical attention until the owner of the vessel could be contacted and he was sure he would be paid for his service. After some delay, perhaps a few hours, but what appeared to be years to

me, he consented to operate on my hand when it was agreed that I would remain at the cannery in the form of a hostage until payment for his service was forthcoming. Cod fishermen were not welcome at this cannery, perhaps because it was a haven sought by most fishermen when they deserted their vessels, and in such occasions they were always broke and sought food and shelter, but had nothing to pay.

Four days after my arrival at Port Moller, when further damage from the fish poison had passed, the schooner appeared on the horizon and the fishermen expressed their desire to return while the weather was good and there was a fair wind to sail the dory back. The doctor, while reluctant to have me leave in the condition I was in and until he was paid for his service, decided to allow me to leave temporarily. He furnished me with a letter to the master of the vessel, in which it stated that I was being permitted to return to the vessel to bring my papers ashore and receive further medical treatment before being sent as a passenger to the United States. Under this agreement I returned to the vessel and presented the letter to the master. However, he would not permit the fishermen to bring me back on shore and we sailed further south the same day, Had I not been physically handicapped at this time I would have launched my own dory and left the vessel right there at sea.

It was bad enough to be on board this vessel when in good health, but now in my condition it was more severe. With one hand swathed in bandages and trussed up in a sling I could no longer climb out on the jib boom to obey the laws of nature, and with one hand I found it was quite impossible to avenge myself on the bedbugs and lice by catching and crushing them between finger nails. It seemed that these vermin were aware of my predicament and left the other bunks to come to mine, and soon I was covered with

bites all over my body -- so many bites that at the end of the voyage the United States Public Health Service stated that there was not a square inch on my body which had not been bitten.

The monotony of the voyage was broken not long after I returned to the vessel, for the fishing season ended and we sailed into Lost Harbour, Alaska, to enjoy the luxury of a bath and to fill our meagre water tanks.

The return voyage was just the usual formality of trimming sails, and pumping bilges every watch, and we made exceptionally good time until we reached Puget Sound and suddenly there was a dead calm. For two weeks we drifted back and forward from the Canadian side of Puget Sound to the American side and vice-versa and not many miles from our destination. Of course, a tug boat could have been hired to tow us into Anacortes, but that would have cost money and with only a few men on the payroll, and the cost of food (salt fish, salt pork and salt beef, and a few cans of dried beans, peas and a little flour) being negligible, the owner found it more profitable to let us drift around for months, sooner than incur the expense of towing us into port. As the sun set on the last day of August the wind came up and next morning, September 1st, 1926, with a fair wind, we sailed right up to the dock in Anacortes, Washington, and the voyage was ended. I lost no time in jumping ashore and leaving everything behind but the overall pants and the shirt which I wore, I headed for the nearest hotel and a bathtub.

As soon as I scrubbed the filth from my body I purchased new clothing and immediately reported to the United States Public Health Service, not only to secure medical attention for the wound in my finger, but to lodge a detailed protest against the unsanitary conditions prevailing on board the vessel. Due to my protest there was some delay in discharging

CODFISH TO THE DECK BEAMS . . .

Archie Shields inspects the catch of the 1946 season, which fills the C. A. THAYER's hold almost to the deck beams.

the cargo of salted fish, and for some time it was problematical whether it would be used for human consumption or converted into fertilizer. Had the public the opportunity to see the condition of the cargo covered with a layer of rat droppings, the owner -- J. A. Matheson of Port Townsend -- would without doubt have had much trouble in selling his fish.

After deductions for clothes and equipment the voyage of four months and twenty days netted me the sum of less than $300. 00 (three hundred dollars) and in addition it was many months after leaving the vessel before I was able to work, due to the wound in my finger, and for such loss of time I was not compensated in any form. As a reminder of the good old days on board the FANNY DUTARD I carried an ugly scar on the second finger of my right hand; it will always be there as long as I live, and in cold weather my memory becomes refreshed when it becomes numb and painful.

It was a hard and dangerous occupation and the amount of money to be made by the fishermen was always far below that received by fishermen employed in fishing for halibut, herring, salmon, and, in fact, any other class of fish.

Incidents in the Bering Sea

The narrative of Jimmy Crooks may lead to somewhat overdrawn conclusions as to the danger of the Bering Sea codfisherman's life, not insofar as the various opportunities for disaster were concerned, but with regard to the frequency of such occurrences. Indeed, at least twenty-seven vessels were lost between 1877 and 1920, with the loss of as many as thirty lives in a single wreck, and fishermen "went missing" in their dories, but the dumping of fish and the days'-long struggle to reach the mother-ship were certainly not "routine" in the life of the Pacific codfisherman.

Yet the life was dangerous and hard, as even the terse logbook of the schooner WAWONA during an era of "improved" conditions in the '30's attests. Between 1934 and 1941 the WAWONA's record of injuries, deaths, and near-disasters is not long, but all of the dangers described by Crooks crop up at one time or another, and the entries tell the same tale of hardship, though from a different viewpoint -- from the perspective of hardened codfishermen, who did go back year after year, such as Charles Foss and Tim Haugen.

> August 10, 1935: This finish the 1935 season with 307,400 fish. Homeward bound.
>
> August 13: Captain Foss died at 11 a.m of Hearttrouble in Lat 54°15'N Long 164°52'W. We called the Cutter and turned bak towards Akun Head.
>
> August 14: We buried Capt Foss at 7 am in Lost Harbor Left Lost Harbor at 9 am in to of U. S. Cutter Chelon.

As the warm weather set in, as the end of the season neared, trouble sometimes started among the fishermen:

> August 2, 1934: two dories out. Fishermen refused to go out fore som reason unknown. Caught 776 fish.
>
> August 12, 1938: Fishermen refused to go fishing. So hove up and Started for Home. No reason at all. fine Weather, 370,985 fish. Catch for 1938.

But if the fishermen sometimes called the end of the season, an early "strike" was considered a much more serious matter:

> July 15, 1939: Mate called out Dories at 4:15 but they refused to go launch Dories, finest kind of Weather. After a good call down they all went out. Will find out the agetators. Ole Wicks and Charles Johnson, Refused to go out.
>
> July 16: fine Weater no Dories out. Hove up at 1 Pm and drifted with the SW tide. no wind, fishermen wouldnt go out.

July 17: fishermen wouldnt go out. Hove up at 5 am and Set all Sail heading SSW. light SE Wind and rain. Anchored at 4:15 Pm in 25 ftm 110 ftm of chain out. Rain Mist and Sunshine.

July 18: Gale of NE, with Mountain high sea. No fishing. Vessel drifted in the morning but hooked up at 8 am. alls well.

One or two serious mishaps occurred each year aboard the WAWONA (and probably on board every one of the codfishermen), and certainly the Bering Sea was no place for the accident-prone, as is demonstrated by the unfortunate career of Nick Field, fisherman of the WAWONA.

June, 1, 1937: Nick Field got hurt taking in dories. Complainging about the chest and neck.

June 2: Nick Field got two ribs broken other wise feeling fine.

June 20, 1938: Dories out at 9:30. Nick Field got a hook right through the finger and laid up for a day. A. Paulson got a hook through the Hand. fishermen and D. gang caught 5799 fish. Cutter Alert called with mail.

June 22, 1940: Dories out at 4:30 and caught 7499 fish. Rough Weather all day. N. Field got a hook in the arm and D. Wallin got a hook in the leg.

April 16, 1941: Nick Field, when making fast the dories hurt the left arm and sholder. Some one let go the dory halyard, but nobody seems to know much about it. to much Whiskey.

May 27, 1941: Dories out at 4:30 am light SE wind and Short Sea. Started to breeze up at 5:30 am at 8 oclock a gale of Wind, SE. all Dories but one aboard before 9 am. Nick Field did not come aboard So two dories and two men in each went looking for him. Chas. Hanson and Pete Benson in dory No. 14 and Fred Stuckey and Ed Hogan in dory No. 9 but no Sign of men or Dory (of Port Moller in 30 ftm - Lat 56°18' long 161°00')

10 Pm, its geting dark and Nick Field is Still out. Sch Dorothy is coming out from P. Moller to search for Missing Dory and man.

> May 28: Nick Field must be lost. Sch Dorothy with Wawonas captain, search from 3 am til 9:30 Pm but no Sign of man and dory No. 21.
>
> May 29: Dories out at 4:30 fine weather but no fish. Cutter Ariadne went by at 11 am. Hove up at 12:30 Pm and sailed NE x N. Cutter "Ariadne" fond the Missing Dory bottom up. So Nick Field drowned on the Job. . .

Nor had the medical services improved much in the decade following Jimmy Crooks' eventful voyage in the FANNY DUTARD, although it is apparent from the WAWONA's logs that the Coast Guard was more readily available than it had been previously:

> July 1, 1939: Clarence Anderson slipped on deck and hurt his Spine. Put a Red Cross Plaster on and put him to bed. Had on a pr of Slippers While Washing deck (Leather Slippers).

The loss of the fish that he might have caught while he was laid up with an injury could under some conditions work a severe hardship upon a man, since "good days" tended to come in bunches. Day after day the total catch of the fisherman could run to less than 1,000 cod, then the day would come when a single man could bring in that many fish in three trips from the schooner, and the total catch would run to 10,000 fish or more. In general, about twenty to thirty good days might be anticipated during a 100-110 day period on the fishing bank. With luck and skill a good fisherman would turn in 12,000 to 15,000 fish in a season, which would net him an income at least twice as large as that earned by Jimmy Crooks.

Decline of Codfishing

The slump in the codfishery following the World War I boom was not succeeded by any continuous and significant upsurge, and the late '20's were about as good times as the industry ever subsequently enjoyed. In general, the trend was downhill during the 1930's, but the shrinking market was supplied by fewer producers, and Robinson Fisheries and the Pacific Coast Codfish Company were still operating on their previous scale at the outbreak of the Second World War. The United States Army took over the old schooners during the War for use as barges, leaving only Shields' worn-out CHARLES R. WILSON to voyage to the Bering Sea.

After the War Shields bought the SOPHIE CHRISTENSON and C. A. THAYER back from the government, but he found himself with three old schooners in such poor condition that none was fit for extensive service. The THAYER had the best hull, and the SOPHIE's rig was in fair condition, but when the THAYER put to sea in 1946 rigged with three of the masts from a four-masted topmast schooner she presented a spectacle which her builder, Hans Bendixsen, would scarcely have approved. But as Captain Shields frequently pointed out, "The codfish don't care."

The WAWONA, again operated by Robinson Fisheries, joined the THAYER for two years, but was retired in 1948. When the C. A. THAYER made her last trip to the Bering Sea in 1950 she was the last commercial sailing vessel on the Pacific Coast, as well as the last of the Alaska codfishermen. The old schooners have not been replaced by modern motor-vessel, and may never be, for the public's taste for salt codfish is slight these days, and what remains of the fishery is conducted in small boats.

Decline of Codfishing

The slump in the codfishery following the World War I boom was not succeeded by any continuous and significant upsurge, and the late '20's were about as good times as the industry ever subsequently enjoyed. In general, the trend was downhill during the 1930's, but the shrinking market was supplied by fewer producers, and Robinson Fisheries and the Pacific Coast Codfish Company were still operating on their previous scale at the outbreak of the Second World War. The United States Army took over the old schooners during the War for use as barges, leaving only Shields' worn-out CHARLES R. WILSON to voyage to the Bering Sea.

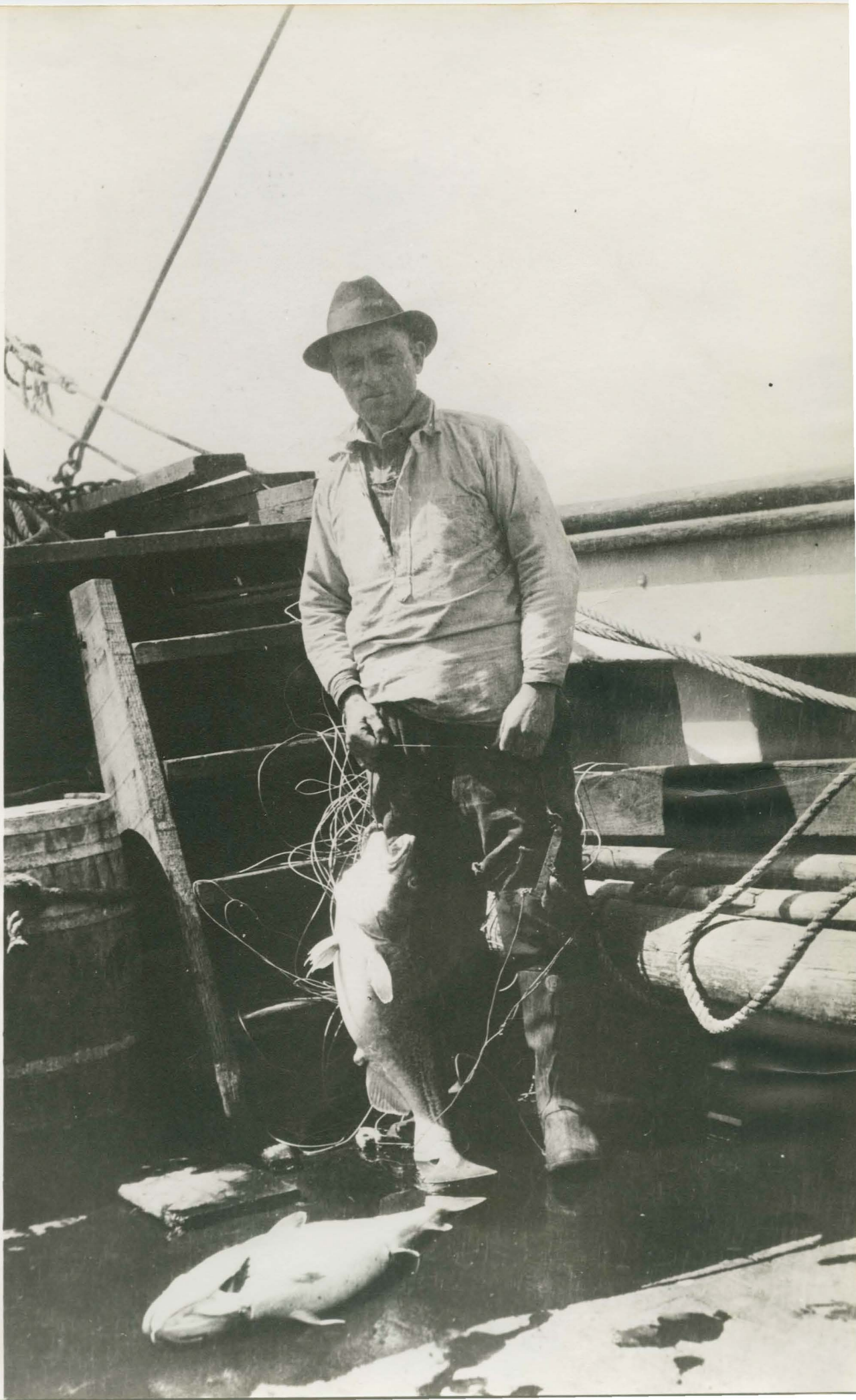
After the War Shields bought the SOPHIE CHRISTENSON and C. A. THAYER back from the government, but he found himself with three old schooners in such poor condition that none was fit for extensive service. The THAYER had the best hull, and the SOPHIE's rig was in fair condition, but when the THAYER put to sea in 1946 rigged with three of the masts from a four-masted topmast schooner she presented a spectacle which her builder, Hans Bendixsen, would scarcely have approved. But as Captain Shields frequently pointed out, "The codfish don't care."

The WAWONA, again operated by Robinson Fisheries, joined the THAYER for two years, but was retired in 1948. When the C. A. THAYER made her last trip to the Bering Sea in 1950 she was the last commercial sailing vessel on the Pacific Coast, as well as the last of the Alaska codfishermen. The old schooners have not been replaced by modern motorvessel, and may never be, for the public's taste for salt codfish is slight these days, and what remains of the fishery is conducted in small boats.

A BERING SEA COD . . .

Ivar Ivarson, one of "Whitehead Pete" Nelson's gang, landed these cod on the C. A. THAYER's deck about 1920.

Between 1912 and 1925 the THAYER's annual voyages to the salmon salteries on the Kvichak River carried her over the codfish banks, and many cod were brought over her rail before she officially became a codfisherman.



C. A. THAYER's Codfishing Career

When Peter Nelson sold his salteries and equipment to the A. & P. Products Corporation, early in 1925, the C. A. THAYER would appear to have been included in the sale, although A. & P. may not have ever taken possession of the vessel. J. E. Shields inspected the schooner as she lay in Hanlon's Shipyard at Oakland late in February, and arranged to buy her.

Shields found that the limber holes were clogged and the chains rusted out, a condition which would have endangered a cargo of salt, and he quickly laid the false flooring above the ceiling which is still installed in the ship. He loaded the THAYER with salt, and she sailed from San Francisco for Seattle on March 3, racing against time to make an early Puget Sound sailing with the codfishing fleet.

The transfer of ownership from A. & P. to the Pacific Coast Codfish Company is dated April 13, at Seattle. The THAYER sailed from Seattle for the Bering Sea on April 26 on the first of her dozen codfishing expeditions. She returned on September 18 with 256,160 fish, largest catch of the Puget Sound fleet.

In 1925 the fishermen received 1-1/2 cents per pound for those taking less than 7,000 fish, 1-5/8 cents for those taking 7,000 to 9,000 fish, while fishermen who caught over 9,000 cod received 1-3/4 cents per pound. In the deck gang the first splitter and salter was paid $135 per month, second splitter and salter $95, and the dress gang members were paid $40.

John Grotle, one of the most successful old-timers of the Puget Sound fleet was the THAYER's master during her first "tour" as codfisherman. [See the biographical sketch of Captain Grotle.] Under his command the schooner made seven consecutive voyages to the Bering Sea.

Declining prices for salt cod led to the THAYER being laid up after her return from Alaska in September, 1931, and through the 1930's the big four-master SOPHIE CHRISTENSON carried the burden of the Pacific Coast Codfish operation. The THAYER was laid up in Lake Union for ten long years, and is reported to have been in very poor condition when the U. S. Army bought her for use as a barge in 1942.

The Army put some $50,000 worth of work into the THAYER at the Marine Railway and Shipbuilding Co., of Eagle Harbor, in the course of converting her to a barge, and these repairs must probably be credited with saving the vessel. She was then towed to Prince Rupert, B. C.

J. E. Shields' opinion of the Army operation was:

> Just another example of how the government wastes money. She became a floating storehouse for holding empty shells from target practice out at sea by the Army. After they got her full of shells they found out that each had a primer cap. And they found that if they melted the shells, the brass wouldn't be the right kind. So they dumped the shells in the ocean, took her back to Prince Rupert, and sold her back to me.

Knute Pearson, J. E. Shields, and Ed Shields successively commanded the THAYER during her five codfishing voyages between 1946 and 1950. By 1948 the THAYER was a lonely anachronism, though to the end she remained an efficient unit in an unprofitable industry.

C. A. THAYER BEACHED FOR PAINTING

The C. A. THAYER lies on the beach at J. E. Shields' Poulsbo plant in July, 1951, for annual bottom scraping and painting.

Ordinarily, the THAYER was drydocked each spring before her annual codfishing voyage to the Bering Sea, but when it was decided not to send her north for the 1951 season, J. E. Shields employed this ancient and economical means of cleaning the bottom.

One side was cleaned on one tide, the other side on the next tide, after which she was refloated to join the CHARLES R. WILSON at anchor. Neither the THAYER nor the WILSON made another trip to the Bering Sea banks.

Bibliographical Note:

The best general work on the Pacific Codfishery is John N. Cobb's "Pacific Cod Fisheries," in Report of the United States Commissioner of Fisheries for the fiscal year 1926, (Washington, 1927), pp. 385-489. This work is particularly strong on the methods of the industry, and while the history is sometimes sketchy in important details, the work contains an excellent collection of statistical tables.

The files of the Pacific Fisherman (1903-1950) contain the most detailed notices concerning the codfishery. The "Statistical Annual" gives a good review of each year's activity. Among the more important articles on the codfishery which have been published by this monthly are:

"Pioneer Codfishing. "(Aug. 1901, p. 14.
"History of the Pacific Codfishery," (June, 1904), pp. 15, 16.
Charles P. Overton, "Pioneers in the Pacific Codfishing Industry, (Annual, 1906), pp. 70, 71, 75.
"Prominent Factors in the Pacific Cod Fishery," (Annual, 1927), p. 130.
"Thirty-one Years a Codfish Skipper," [life of John Grotle] , (March, 1932), pp. 41, 42.

The annual Report of the Commissioner of Fisheries, commencing in 1871 contains many useful notes, particularly in the appendices, and starting with 1905 an annual report on Alaska fisheries is a fixture of the Report. (Since 1940 the Fish and Wildlife Service has published the annual report under the title "Alaska Fishery and Fur-Seal Industries. ")

The Bulletin of the U. S. Fish Commission was published annually from 1881. The reports of Z. L. Tanner on the Alaska explorations of the ALBATROSS in the 1888 and 1889 Bulletins are partucularly useful.

Tarleton H. Bean, "The Codfishery of Alaska," in the Fisheries and Fishery Industries of the United States by G. Brown Goode, et al., (Washington, 1887), Section V, vol. 1, pp. 198-226, is the most important of the earlier works on the North Pacific codfishery.

CAPTAIN JOHN GROTLE OF

THE C. A. THAYER

Captain Grotle was master of the C. A. THAYER from her first codfishing voyage, in 1925, until she was laid up, in 1931.

Captain John Grotle,
of the C. A. THAYER

From an interview published in the Pacific Fisherman in March, 1932.

When Captain John Grotle warped the schooner C. A. THAYER to the Poulsbo, Washington station of the Pacific Coast Codfish Company in September, 1931, he completed his 30th consecutive year of codfishing in Alaska waters, a record which makes him dean of the Pacific Coast codfishermen.

Moreover, when he walks out on Pier 8, Seattle, among the active halibut fishermen, he recalls that, although he is no longer connected with that fishery, he entered it before any man now engaged in halibut fishing. That was in 1892. He cannot be certain, but he knows no one in Seattle who was fishing halibut when he began.

Captain Grotle was born in Norway. He was doing a man's work on codfishing boats at the age of 14. Coming to Puget Sound in the early '90s, he combined fishing and building. He put the steelwork on the old McDougall & Southwick building at First and Columbia Street, worked on the old Hoge building and on the old Seattle Theater.

It was in 1892 that he started fishing halibut, using a 16-foot skiff which he built himself, and working out of Port Townsend. Then he got a Columbia River gillnet boat and decked it over. Halibut was caught in Puget Sound in those days, but it was hard to sell, and Captain Grotle found it necessary to peddle his fish, talking people into buying it. "We don't eat fish. We're not Siwashes," they told him.

In 1894 he got the schooner YUKON in partnership with Jack Johnson. The craft was 50 feet in length and was considered altogether too large for the business. Other halibut schooners of that day were the PILOT and the ST. LAWRENCE. He fished halibut from 1892 until 1897, fishing in the Fraser River for salmon during the Sockeye season, this salmon run giving a more remunerative occupation than halibut fishing while it lasted.

In 1898, with the Yukon gold rush at its peak, he took a small steamer knocked down into seven sections to St. Michael, put her together and took her up the Yukon. The mines were no place for a sea-faring man, he decided, and he spent little time there.

The turn to codfishing began in 1900 when he went to Boston, where he purchased the schooner CARRIER DOVE for a partnership composed of himself, George B. Helgerson, grocer, and Drs. E. and I. Jansen of Seattle. He brought her out to the Pacific Coast through the Strait of Magellan, and went on his first codfish trip with her in 1901.

The voyage went to the Shumagin Islands area, where Captain Grotle located codfish stations, among them one where the Squaw Harbor cannery of the Pacific American Fisheries is now situated. The codfish brought back by the CARRIER DOVE in her early trips were sold to the Chlopec Fish Company, Seattle, and the Seattle Alaska Codfish Company had its inception at this time.

The company acquired the schooner NELLIE COLEMAN and operated her in addition to the CARRIER DOVE until 1906. The latter schooner was exceptionally fast, Captain Grotle rating her as the handiest vessel he has ever commanded. She made the run from Squaw Harbor, Shumagin Islands, to Cape Flattery in five days, which is good time in any company. When she was sold in 1906 power was installed in her and she went after halibut.

The NELLIE COLEMAN was lost with all hands in 1906, and the Seattle Alaska Codfish Company purchased the famous MAID OF ORLEANS. The company continued in business until 1910, when it was sold to C. P. Overton of the Union Fish Company, San Francisco.

Captain Grotle and the Jansens were not content to keep out of the codfish business, however, and the Pacific Coast Codfish Company was organized in 1911, others in the company being J. E. Shields, its present president, with whom Captain Grotle has been continuously associated since, Chris Moe and Andrew Moe of Poulsbo, P. Hallberg and others.

The schooner JOHN A, still a member of the company's fleet, was for sale in San Diego and Captain Grotle went down to look her over, bought her and sailed her back. He took her north for the 1911 season.

The Sanak Islands banks were Captain Grotle's favorite fishing grounds in those days. The fish were larger than those taken in the Bering Sea, but operations were dangerous, as the banks lay near a lee shore.

The following year the JOHN A was nearly lost during the Katmai eruption. A terrific wind caught her at the time and she ran under double-reefed sails. In this condition she was driven onto a spit and swept by a sea which carried her over the spit and into deep water beyond, but with a broken main boom and a twisted rudder. Captain Grotle managed to work the schooner into King Cove, where he beached the vessel, repaired the rudder and got her to sea again in time to take a good trip of fish for the season.

The company bought the CHARLES R. WILSON in San Pedro that year and added her to the fleet. The MAID OF ORLEANS was bought back again in 1913 from the Union Fish Company. She was operated in the cod-fish trade for a number of years and was then sold to the Hudson's Bay Company which is still using her as an Arctic trading schooner.

Captain Grotle commanded the JOHN A for eleven years, shifting over to the CHARLES R. WILSON in 1920 and staying with her through 1924. The C. A. THAYER, his present command, was bought by the company in 1925 and he has been her master since.

As the years went by J. E. Shields, who at first handled the sales for the Pacific Coast Codfish Company, became more and more closely identified with the company and its administration, also acquiring vessels of his own. In 1930 he purchased the interests of the Drs. Jansen in the Pacific Coast company, acquiring control and becoming president.

Captain Grotle has seen halibut fishing grow from skiffs working in Puget Sound out from Port Townsend to a fishery of 400 power boats, most of them diesel craft, running up to 100 feet in length and operating from Puget Sound, Southeast Alaska and Prince Rupert to beyond the Sanak Islands, where he did his early codfishing.

There has been less outward change in the cod fishery, which is still carried on in much the same time-honored fashion as when he made his first trip 30 years and more ago, although the powering of dories with outboard motors within the past few years has wrought a remarkable increase in their efficiency.

As evidence of this increased efficiency, it is noteworthy that Captain Grotle's fare with the C. A. THAYER in 1931, numbering 302,000 fish, was the largest in numbers of fish ever brought to an American port by a codfish vessel. Due to larger fish, other trips have weighed out more, but never before has a Pacific schooner tallied more than 300,000 fish into her holds in a single season.

THE PACIFIC COAST CODFISH COMPANY

A description of J. E. Shields' codfishing operation, from the 50th Anniversary Issue of the Kitsap County Herald, Poulsbo, Washington, (5 October 1950).

This excellent summary of the local codfishery was also its obituary, for the C. A. THAYER never made another voyage to the Bering Sea. The NORDIC MAID, a power vessel, went to Alaska in subsequent years, but for the giant king crab. Small amounts of eastern cod have been packed by the plant since 1950, but at present it appears unlikely that the industry will revive.

Hand lines and a sailing vessel—and men to work them—bring in the annual codfish catch which keeps Poulsbo's noted Pacific Coast Codfish Co. in full-scale and profitable operation. The plant, now in its fortieth year of operation, is Poulsbo's largest single enterprise. Its employees share a $100,000 annual payroll.' Donation by the city in 1911 of the tract of land on which the buildings stand has therefore proven to be a fruitful and farsighted investment.

Captain Ed Shields, plant manager and skipper of the schooner C. A. Thayer, points out that the Pacific Coast Codfish Co. is the only plant on the Pacific Coast that produces and markets American codfish. The only other codfish plant, in San Francisco, imports the fish which it processes. By controlling all steps of processing from the moment the fish are caught, Pacific Coast Codfish Co. is able to market an exceptionally high quality product, which is sold under its "Icicle" brand in all western states.

Hand line fishing from dories, Captain Shields explains, dates back at least to the days of Columbus. According to legend, on his return from his second voyage to America, Columbus sailed past the Grand Banks of Newfoundland, where he found Norsemen fishing by essentially the same methods used by the Thayer's fishermen this last season in the Bering Sea. The principal improvement in the intervening centuries has been the addition of outboard motors.

It is still the most productive method of fishing yet to be devised, Shields points out. With a crew of 30 men in their 60 to 70 day fishing season, the schooner brings back a cargo of 2 million pounds of codfish "in the round" in an average season's catch. The cured weight of the fish which are brought in at the end of the season actually amounts to about one-fourth of that. A fish "in the round" refers to its weight when freshly caught. All fish brought in by the Thayer's dories are cleaned and put into cure within a maximum of ten hours from the time they are caught.

In the best two years which the codfish plant has known, the seasons of 1940 and 1941, the catch far exceeded this average figure. In those years, the two schooners Sophie Christensen and Charles Wilson brougth in 1,000 tons of cured fish each season. That meant 8 million pounds of fresh fish caught by the two crews. Since a cod will average 14 to 15 pounds, the catch those years equaled approximately 600,000 codfish.

Codfishing is a comparatively minor industry on the West Coast. But there are more fish sold, prepared by the method the codfish plant uses, than by any other method of processing, Shields states. The East Coast industry is a large one, and in many other countries the cured fish method predominates.

The original plant of Pacific Coast Codfish Co. was approximately one-fourth the size of the present buildings. The first vessel used was the three-masted schooner John A., and the first master was Captain John Grottle, who remained with the company until 1933. A member of the first ship's crew was Oscar Franson, who still works for the company and who qualifies as their oldest employe in years of service.

The company was largely owned by residents of Poulsbo and vicinity, including I. B. Moe, Nels Sonju, A. F. Martin, Andrew and Chris Moe, and George Teien. J. E. Shields was part owner, and served as salesman and manager until 1928, when he acquired sole ownership of the firm. After learning the finer points of seamanship and navigation, he was granted his master's papers and sailed as captain the season of 1933. He made the trip as captain every year thereafter until 1941. Knute Pearson, captain of the firm's other ship when two were operating, took over the run of the single ship which the plant operated during the war years, up to and including the 1947 season. J. E. Shields returned as skipper in 1948, and Ed Shields has captained the Thayer its last two seasons. The season of 1943 was the only year in which a ship has not been sent to the fishing banks, the government having forbade operation that year.

The company has owned and operated many sailing vessels, and has sent as many as four some seasons, when conditions warranted it. They acquired the the Charles Wilson in 1914, and in later years the Maid of Orleans, the Sophie Christensen, the C. A. Thayer and others. The Maid of Orleans and the original vessel, John A., were disposed of a number of years ago. The Sophie Christensen was sold this summer to a Canadian firm for a lumber carrier. The Wilson is still owned by the codfish plant, though it is no longer used for the run to Bering Sea, this job now being handled only by the C. A. Thayer.

Two events of major interest in Poulsbo are the departure and return of the codfish schooner. The schooner leaves as soon after the first of April as possible, last year on April 10. It is towed by tug to outside the Straits of Juan de Fuca, from which point it proceeds under its own sailing power to the fishing banks in the southeast part of Bering Sea, a journey of approximately 2,000 miles. The voyage to the banks requires about 30 days, while the return trip, with westerly winds, takes about three weeks. From the time it leaves until it is moored again in Poulsbo, the schooner does not touch at any port. For the men, there is no such thing as shore leave.

The schooner's equipment includes 14 Cape Cod dories, 19½ feet in length. Fishing is entirely done from these dories, with one man to each boat. Until 1927, the dories were rowed by hand. Since that time, outboard motors have been used, the codfish plant being one of the pioneers in the use of outboards for fishing dories. This is the most rugged use to which an outboard can be put, Ed Shields points out. All dories use the 12 hp. Johnson Sea Horse, which Shields has found to be entirely dependable. With the careful maintenance the company gives them, the motors last for 15 seasons and more, and require little attention during the fishing season.

The Thayer carries a 30 man crew. The crew performs the dual operation of catching, then dressing the fish. To process the catch brought in by the 14 fishermen, a dressing crew of 12 men is required.

For the fishermen, a typical day's work begins with breakfast at 4 o'clock in the morning. At 4:30, the dories are launched and the fishermen fan out from the parent ship to the spots where they drop their lines to begin the day's fishing. Two lines are used from each dory, one on each side of the boat. Hooks are baited with halibut if that is available.

The banks where the C. A. Thayer operates are the best proven codfish banks on the Pacific Coast. The ship anchors about 10 miles offshore, and dories fish as far as 5 miles from the ship. The method used is bottom fishing, the depth of the water at this distance from shore being approximately 150 feet.

At 9 a. m. the dories start coming in for dinner, which is served at any time from 9 until 11 o'clock. This is the heaviest meal of the day, as the fishermen still have a full afternoon's work ahead of them. They return at the end of their second trip for supper at 5 p. m., which concludes the day's work for the fishermen.

The dressing crew starts to work as soon as the first dory or two arrives with a reasonably good catch about 9 a. m. If the fish are biting well, they work from that time on at top speed until the last of the day's catch is put into cure. If the fishing is exceptionally good, they must work well into the night, since the catch for each day must be processed completely to clear the work for the succeeding day's catch.

Fish are dressed by removing the heads and entrails, splitting them open, and thoroughly washed. To cure, they are placed in the hold of the Thayer, where they are salted down. The secret of the high quality of his company's plant, Ed Shields explains, is this speedy processsing. In no case does it take over 10 hours from the time the codfish are caught until they are cured, and with most of them it will be several hours less than that. The curing thus begins while the best of the flavor is still in the fish.

In the three months the C. A. Thayer lies off the codfish banks, there will usually be only three weeks or so when both the weather and fishing are ideal. This summer, for example, over half the catch was obtained in a three-week period. During that time, both fishing and dressing crews must work at top speed to take full advantage of favorable conditions.

Though the hand line method may seem primitive, a good fisherman can bring in an astonishingly large number of fish. In a 4 or 5 hour period, a single boat can bring in as many as 300 to 350 fish. To do this, a man must catch, haul in, and take off the hook at the rate of 100 fish per hour. The record for one dory was set several years ago at 1,062 fish in one day's fishing, caught by William Lund. In this case, the dory made three trips from the schooner.

The record catch for a schooner was set by the Sophie Christensen with 17,000 fish caught in a single day, from her 22 dories. J. E. Shields was master at that time, in 1933. This is the equivalent of roughly 180,000 pounds of fresh fish.

The Bering Sea codfish are true or gray cod, only distantly related to some of the local Puget Sound varieties of codfish.

By the time the schooner has returned with her cargo to Poulsbo, the cured fish have lost 75 per cent of their weight, so that 1 pound of dried codfish at this point equals 4 pounds of fresh. Additional weight is lost in later processing by removal of skin and bones, so that the 1 pound package of "Icicle" brand codfish is equivalent to 6 pounds of fresh codfish.

As soon as the ship is berthed, the fish are transferred to brine tanks, where they remain until processing. They are taken out of the tanks as needed. Processing starts almost immediately, and continues at a steady pace until the ship is ready to go out again the following April. Members of the ship's crew may work in the processing plant if they desire. The plant provides steady employment from early fall until late spring for its 21 employees, including 8 women.

In the past, the fish have been processed in just two ways, by packaging and by the whole fish. Only the larger cod are boned and skinned for packaging. The smaller fish are sold whole for use in lutefisk, or klipfish. The latter method of preparation is also known as baccals.

Last year, for the first time, the plant prepared their own brand of lutefisk, of which they marketed 80,000 pounds. The innovation was successful, and will be continued in the future.

Ed Shields took his first trip to Bering Sea as a crew member in 1934, and took other subsequent trips, meantime attending the University of Washington, where he studied engineering. He graduated in 1939, then took a year of graduate engineering work at Harvard. He put engineering training to use in the Bremerton Naval Shipyard during the war. Since obtaining his master's papers, he has skippered the C. A. Thayer during her 1949 and 1950 voyages.

He would like to put an end to the constantly recurring rumors that the Thayer has made her last trip to the Bering Sea fishing banks. They have operated successfully for the past 40 years with their present methods of fishing, he points out, and he sees no reason why they will not continue to do so. Work is already under way on the vessel, preparing her for next season's visit to the far north fishing grounds.

THE PACIFIC COAST CODFISH COMPANY

In December, 1946, the C. A. THAYER, CHARLES R. WILSON, and SOPHIE CHRISTENSON lay alongside J. E. Shields' dock at Poulsbo, Washington.

The C. A. THAYER, rigged with the SOPHIE CHRISTENSON's masts, and recently returned from her first post-war codfishing voyage, is in the foreground.

Behind the THAYER is the CHARLES R. WILSON, which supported the Shields' operation during the war years, and completed her last codfishing voyage in 1945.

The big SOPHIE CHRISTENSON, principal vessel of the Pacific Coast Codfish fleet during the 1930's, is the hulk in the background.

NARRATIVE OF THOMAS O. ("CODFISH") THOMASEN

Fifty Years a Seaman

- Around the Horn to San Francisco
- The Sailors' San Francisco -- 1900
- A Codfisherman's Career
- Steamers and Bootleggers
- Last Years in Codfishing

Codfishing in the Bering Sea

- Working with Alaska Shore Stations
- Dories
- Fishing on the Banks
- Codfish Skippers and Codfishermen

"CODFISH" THOMASEN

November, 1959 . . .

Captain Thomasen pours out a nip for Fingal Larsen.

PART I: FIFTY YEARS A SEAMAN

Around the Horn to San Francisco

I started going to sea back in Europe. In 1900 I came out here in a four-masted bark from Glasgow, Scotland. We went down the South Seas, around the Horn, and it took six months and ten days. The name of the vessel was the CORONA. That was 1900 and I've been here ever since. I was born and raised in Bergen, but haven't been back there for sixty-three years. I didn't sail in any other British ships, but I was in several Norwegian vessels: ARISTOS, GUSTAFS BERG (a steamer), and ERLING. ERLING was a three-masted full rigger from Nova Scotia -- a wooden ship. Norway bought her and rigged her into a bark. She ran between Canada and England with lumber, making two trips during the summer, and in the winter was tied up. This was in 1896 or 1897.

I started going to sea in 1895 in fishing boats up around Norway. We went herring and cod fishing, and fishing of all sorts, up there during the summer in boats about the size of the GJOA. They were used more or less as rooming houses, and then they had small boats to fish away from the mother ship. I started fishing right after I was confirmed, when I was fourteen, and in 1897 I left Norway and I haven't been back since. It's a funny thing -- with all the traveling I've done, I never got back to the Atlantic on the European side.

Life on a wooden bark for a young fellow was "Work like Hell and not much to eat." I was a deck boy. We ate that old stockfish -- put it on the gypsy head on the windlass forward and hammer it with a sledge hammer. Otherwise you couldn't cook it -- it was like a rock.

Six o'clock in the morning I had to get up, and worked 'til six o'clock at night.

Once, in Sweden, we came from England with a load of coal to Westerwick, and we had to heave the whole cargo up by hand. This was in the little ARISTOS -- a wooden ship. They were all wooden ships.

We weren't ill-treated. I got along all right. Of course, we had a scrap over who was going to have this piece of meat or that, sometimes. I've seen the goddamndest fighting over that! On the English ship coming back -- that was the hungriest cockeyed thing I ever saw. There were twenty-four before the mast, and we'd have this one piece of meat to cut up in twenty-four pieces. You should have seen the fighting over that. The English were the hungriest ships of them all. But you didn't do much work on them. "Hungry and easy" was what they were called. Comparing Norwegian and English ships of that time, the conditions were a little better in the Norwegian, but the pay was better in the English. The hours and watches, and so on, were practically the same. But the eats were lousy in the English ships -- they were known all over the world for that.

When I came out to this coast, I was planning to make about $5,000 in a hurry, and I'm still looking for the dollars. From three pounds to $15 - $40 a month was quite a break for a young fellow. I thought I'd stay here, and four or five thousand dollars sounded like a million or a billion. Then I'd go home. I'm still looking for it!

Nothing out of the ordinary happened coming around the Horn. It was the middle of winter, tough weather, and it was six months ten days coming out there. We came from Southshields, England, with coke and coal.

I went moon-blind on that trip. The minute the sun went down, I

went blind, and I had that until we arrived in San Francisco, and when I got to San Francisco it disappeared just like that. They say we got it from sleeping out on the hatch -- two of us got it. Never had it before or since. The first time I noticed it, we had been up making one of the sails fast, and we came down again -- there were four or five of us, and instead of coming inside the railing, I went outside it, trying to step on deck. I didn't know I was outside until somebody grabbed me. I could see in the fo'c'sle, and I could steer by the binnacle -- anywhere there was a direct light I could see, other than that I couldn't see a thing. Some say that it is caused by not having enough vegetables, and some say that if you get a good look at green grass or land it will disappear. I don't know, that's just what I heard.

The Sailors' San Francisco, - 1900

When we arrived in San Francisco, boarding house runners came out to us. In Whitehall Boats. I went to the old sailors' home up on Main and Harrison -- Johnnie Ferem's. He later took a little schooner out with a crew from the boarding house and disappeared, schooner and all. She was a three-topsail schooner, working for Dolbeer and Carson Lumber Co., of Eureka. Ferem was a pilot in the San Francisco fireboat No. 1. But he was in the fire department after I went in. There was too much graft connected with his boarding house and he was closed out.

It was World War I when Johnnie Ferem took off in the little BERTHA DOLBEER, 1914 or 1915. She loaded case oil for New Zealand. I was captain on the bark NARWHAL carrying case oil at the same time to New Plymough, North Island, New Zealand. I knew Captain Erie, who had her later. He took a bunch of yachtsmen to cruise in the South

Seas in the NARWHAL in 1920 or 1921 and back again. And he was in the movies. He fell overboard off the ELWYN C. HALE in Sausalito and drowned, and his body was picked up outside around Pt. Diablo someplace. I was captain of the HALE in 1939 -- after he died.

My impression of San Francisco was that she was a big city. In the old Pacific Building on Fourth and Market there was gambling, and the whore houses were around the corner on Kearny, and up along Broadway. Maiden Lane was one of the worst ones -- and DuPont Street, which is Grant Avenue now. There were all nationalities too. Two dollars a dig. But the Mexicans up in the Alley there, they were good, too. You come in, it was two bits or four bits -- you come in after 12 o'clock and the trade is slack, why they're willing to do it for a dime. So I always waited until after 12 o'clock, after the trade got slack. This Alley is between Pacific and Broadway, close to Broadway, where all the Mexicans lived. DuPont Street was all Chinese cat houses, and the white women were on Jackson Street -- one big building was 666 Jackson. They imported girls from France and Germany -- high class stuff; that was $2. Maiden Lane was going in those days -- "dirty little alley."

The first schooner I shipped on out of the sailors' home was the W. F. JEWETT. She was supposed to be the biggest three-masted schooner on the coast. Next was BEULAH in 1901, during the strike. We made a trip up to Southeastern Alaska with a lot of Chinamen for the canneries and a Salvation Army gang. I forget the name of the place. Then we went down the coast and loaded lumber for San Pedro. We made two trips to San Pedro and the Columbia River before we went back up to Alaska to take the gang home and all the salmon.

We were paid $40 a month, pretty good pay for an AB. Going to Honolulu was $35, or rather $25 for deep water.

I think it was Captain Anderson who was skipper of the BEULAH. She was codfishing one or two trips, and Captain Eire had her up to Dutch Harbor. In those days the BEULAH was a tight little ship; she was nice. Captain Hansen was her last captain. He was born in the East of Danish descent; in Nova Scotia, I believe. His mother was a Nova Scotia Indian, and his father was a Dane.

In the JEWETT we just carried lumber, on the coast. They had just started building the breakwater down in San Pedro at that time. We loaded out of Gardiner. I was in the JEWETT seven or eight months, quite a long time, just up and down the coast. One trip we loaded at Astoria. It was kind of unusual for me to stay with the JEWETT as long as I did. Most of the men would make a trip and beat it to get another ship.

All the docks in San Francisco were in bad shape in those days. You had to look where you were going if you went down to the docks. You would either go through the planks or watch so one wouldn't hit you in the head. They were all rotten. Every door was a saloon down on East Street in those days. I stayed with ships and sailing ships; I never got away from the goddamn sailing -- that was my trouble. That was what held me back from getting into the steamers because I just held on to the sailing ships.

When I was sailing before the mast I made the trip to Australia or New Zealand occasionally, but mostly I sailed codfishing.

Between trips I stayed at the boarding houses -- "Shanghai"

Nelson's, the "Pioneer House," all of them. The Pioneer was a nice place. It was run by Charlie Ahlgren; he was an old man with a white beard. The saloon was in front, dining room in back, and the rooms were upstairs. There were two men to a room -- and plenty of bedbugs Young Charlie Ahlgren had a single room up front, facing Steuart Street; later he opened the "Seaboard" House on East Street. He may still be alive. Eddie was the other son.

The rooms were lit with candles, and you washed up at a long wooden water-trough on the back porch. Room and plenty of food for $20 a month. Whiskey was $2 a gallon, and you put up one dollar to buy for the house anywhere -- no matter how many people were at the bar. That was the standard price.

A Codfisherman's Career

After I started codfishing [1903] I stayed at the boarding houses in the winter -- always ran a hundred dollars or so in the hole before shipping out. But everybody trusted everybody in those days. They lined up outside the Shipping Commissioner's office when the fishermen were paid off. Sometimes I would ship in a steam schooner when I was broke -- good pay, and the best food in the world, all you could eat, but damned hard work.

During the wintertime most fishermen didn't do anything -- they just laid around, drinking up their money. The biggest pay they ever got was put on the bar for a six months' trip. That was money in those days -- everyone was happy. They hung around East Street -- they never got above Kearny, Steuart Street.

I later worked all year round -- had a steady job. I was married and had to work. Before that I just layed around, too. I sailed as fisher-

man in the season, and I went in the dress gang. I was splitting, too. This was before I was captain -- I went up mate several years before I went captain.

In 1903 I went fishing in the CZARINA, fisherman in her. That's the time they had the old boats up there like the FREMONT. There were three codfishing companies back in that time, but I don't think it was a big business. There was Alaska Codfish Company, Union Codfish Company, and the Lind & Huff Company -- and there was another, Captain Woodside. Johnnie Ferem got drowned in one of his boats.

I got the name "Codfish" many years ago up in the lifesaving station. I got that for giving a son-of-a-bitch a job out there. He christened me "Codfish" Thomasen, some guy that's been dead for many years. I was at Fort Point, Golden Gate, and South Side. I spent every winter out there. Whenever I came home from Alaska I got a job there. They wanted a good boatman, a doryman, and that's what I was. A lot of fishermen did that, because they wanted men that could handle a boat. There was no gas in them days. You had to row, and get out through the breakers, and you had to be a reasonably good swimmer, etc. This was in 1908, '09 and '10.

My last year was 1910, then I got out and joined the Fire Department. I didn't like that, and I quit. I was in the Fire Department in 1913, 1914 and '15. Left in the spring of '15 down on the fairgrounds at the Panama-Pacific Exposition. They had the two old steamboat fireboats there.

Then I made a trip to New Zealand in the NARWHAL. I joined the CITY OF PAPEETE in 1916 or 1917. Before 1910 they rigged her from a barkentine to a three-masted schooner. I got $250 a month, and that was a lot of dough. I had her for seven years and I hated to quit the

job and go before the mast in a steamer. I was master of the CITY OF PAPEETE when she was fishing in the Bering Sea. She used to go fishing in the summer, and in the winter time take the gang up to the stations with the salt and provisions. And that was one of the toughest trips in the world, barring none. Laying around Umshimek Island around Christmas time trying to make land -- Christ, ice from the truck down to the keelson. You couldn't even lower the sails if you wanted to. Just ice.

I picked up my licenses all along -- mate's and master's -- when I had time ashore. I went to Taylor's Navigation School and that other one, in the Ferry Building. Later I went into steamships. I am licensed master in sail and steam.

Steamers and Bootleggers

After leaving the CITY OF PAPEETE I went into the Associated Oil Company, the tankers, for several years. All the companies had sailing ships -- the FULLERTON was owned by Union Oil -- but I was on steam tankers. I spent four years with the Associated Oil Company, mate or second mate. I got away from there for many reasons. The smell of that oil didn't agree with me. Going up she'd carry nothing but gas, and they had two tanks right under the bridge. You had to go on your belly to go between the bridge and the tanks, and the fumes, loading, well you had to stay right there to get the tanks filled. Christ, you'd come out on deck sometimes and roll around like you was plenty drunk, eating that gas all the time, and it didn't agree with me. Half of that gang is dead now, and captains, some of them.

I never was in the FALLS OF CLYDE, but we were loading her in Ketchikan in the FRANK H. BUCK. She was cut down in '22 and taken up there for an oil barge and stayed until last February.

After Associated I mostly chased around between steamers and sailing ships, mostly sailing ships. Sailing ships may be cleaner but they're more work and more misery.

During the Prohibition a lot of sailors got mixed up in bootlegging. There was "Whiskey Pete" Larson, who used to be in the salt steam schooners -- mate. He was bootlegging and damned near went to Alcatraz. Henning Carlson was captain and "Whiskey Pete" was mate with him. The whole gang damned near went to Alcatraz for bootlegging off the BERTIE HANLON. They discharged in Eureka -- Fields Landing -- loaded three or four box-cars with whiskey and boarded them up, and they were going into Ohio or one of those middle states. They didn't have a chance to get rid of it and it stood there about a week and the F. B. I. got wise to it. They were waiting for them, I guess, to come and get it or something, and they traced it to the HANLON. The crew was in on it and somebody probably got drunk and spilled the beans. They took the whiskey from a Canadian boat lying outside at anchor off the Farallones.

I tried rum-running, too, but I gave it up. A fellow put me wise; said to go down to so and so, and he's looking for somebody to take a rum-runner out. They still had some of those sub-chasers then that they built in the first World War, three engines in them, ninety footers. So I went down to San Pedro and got off about twenty miles off Catalina Island and there was the boat. I was supposed to make another connection with another steam schooner going up north, the FRANK STOUT. But I couldn't make connections, and Christ, the goddamn boat was leaking, and we had the pumps and buckets and everything running. Laid over there about two weeks trying to make connections. Finally I ran up to just this side of Point Arena to a couple of rocks in there and I walked ashore -- told the other fellow to take her and see if he could get rid of

it. He got rid of it all right, but he was out there another two weeks waiting to make connections. I tried that and that's all I wanted of it. It was middle of summer and she was rolling around with a northwesterner, and you know how rough it gets outside.

Going back to the STOUT and the booze, she was supposed to take in to 'Frisco, and when they first started rum-running it was easy to discharge it -- there was nobody on the dock. They'd have boats in the bay waiting, or truckers. Some of the rum-runners made money, some of them went to jail.

Last Years in Codfishing

Altogether I was captain of the GLENDALE, four masted WM. H. SMITH, CITY OF PAPEETE, and GOLDEN STATE. That was quite a trip in the GOLDEN STATE, too, up there in the Bering Sea to get the fish from the Japs. We didn't do any fishing. We just had a regular crew. They took the engine out of her and we towed up with the ELWYN C. HALE, and sailed back. We took the fish in sling-loads from the Japs and threw them in the hold, spread them out and salted them, and went home with them. They caught them and we bought them. They were weighed down here. The deal was already arranged before we went up, andit was the first and only time it was ever done. Codfish, (that time) or anything else being taken from one ship to another in the Bering Sea. This was in about '37, and Union Codfish owned her.

The Japs had a big, fine, beautiful ship -- mother ship. It had been an old English steel ship, a freighter, and they had the most modern trawlers, 150' trawlers, with modern diesel engines in them. They really treated me; why, I thought I was the King of Sweden when I came

on board to see them. There was everything from a needle to an anchor on that boat -- all kinds of liquor, and anything you could mention to eat, snacks, and God knows what all. They treated me 100%. The only man that could speak English was the 3rd mate. He was the interpreter.

They took the fish, dressed it, and cleaned it on the big ship, then in small gasoline boats, run-abouts or launches they came over to me with them and we hoisted them aboard. There was some kind of sqawk from the Government of Alaska at that time about catching our fish with foreign labor, but we got rid of it all right. It was just jealousy.

I was skipper out of Honolulu on my last trip to sea, in '46. During the War I was in steamers -- Liberty ships -- sailing to the South Sea Islands out of Honolulu, working for the Hawaiian Pineapple Co., and carrying war material and things around the South Sea Islands.

PART II: CODFISHING IN THE BERING SEA

Working with Alaska Shore Stations

The San Francisco boats used to leave about the same time the Seattle ships did in the spring. The salmon and codfish ships all got up to the Bering Sea about the same time. We sail out through the Pass and they're laying out there for the whole cockeyed week and two weeks to get through -- fourteen to eighteen ships trying to get through the Pass into the Pacific. Southwest wind and strong tide -- you couldn't beat through, just had to watch your chance, a change in winds.

Our company had four or five stations up there -- Sanborn, Sand Point, Unga -- on the islands. From eight to sixteen men: single gang, eight; double gang, sixteen. Fishing codfish and that's where they started fishing with outboard motors. We fished differently than the Seattle companies -- they didn't have stations -- they fished right off the ships, salted the fish and stowed them. We did the same thing, though, in the Bering Sea but with the stations it was different. They had a bunkhouse, cookhouse, and everything else -- their own dories and everything.

We used to go up there once a year, to take the fish that they had accumulated during the summer or winter, and take all that fish back to San Francisco. The fish that were caught in the Bering Sea were caught out of the dories and delivered right on the ship. Then they'd have to make another trip to provision the men on the stations. We had no real "season" on the station -- fished all year round as the weather permitted. After we came from the Bering Sea around August or September and dis-

charged, and loaded up with provisions and salt, we went back around Christmas time for the station, to keep that gang going for the winter. Took up salt horse -- a dog's diet -- and men if they needed them. There were a lot of salmon salting stations up there but not many codfishing stations. They had the salmon salting stations up on the Bering Sea, also.

Some islands were a little better than others for fishing, and those had the double gang. Every man had his own dory, and the dories were left up there all the time. They were anchored at night, and if it blew up in the night you'd have to get up and pull them up on the beach.

Sailing up there in the winter time was tough. I think there's no worse weather in the world than up in the Shumagin Islands. They never got extra pay in the winter -- same pay all year round. We never seemed to have any trouble getting men to go up there in those days, now you couldn't get one if you offered them a million dollars. They were a bunch of drunks, but they were rattling good men once you got them sobered up. Mostly Scandinavians, and Nova Scotians.

When we went up in the winter, we were there three or four months altogether, depending on how long it took to get up there. We had a lot of westerly wind to buck between here and Alaska -- 2,000 miles -- thirty to forty days to get up there. Coming home was nothing -- eighteen to twenty days, gale westerly winds. The schooner would lay at anchor there. In the winter we would service the stations and in the summertime we'd go up and anchor and follow the fish around in the Bering Sea. There was one other codfish station near Unimak Pass, but it lasted only about a year. It was around Dutch Harbor someplace near the south entrance to the Pass. Altogether in all the stations they'd have about a hundred men up there.

Fishing from the schooner, the fish would be brought to the ship

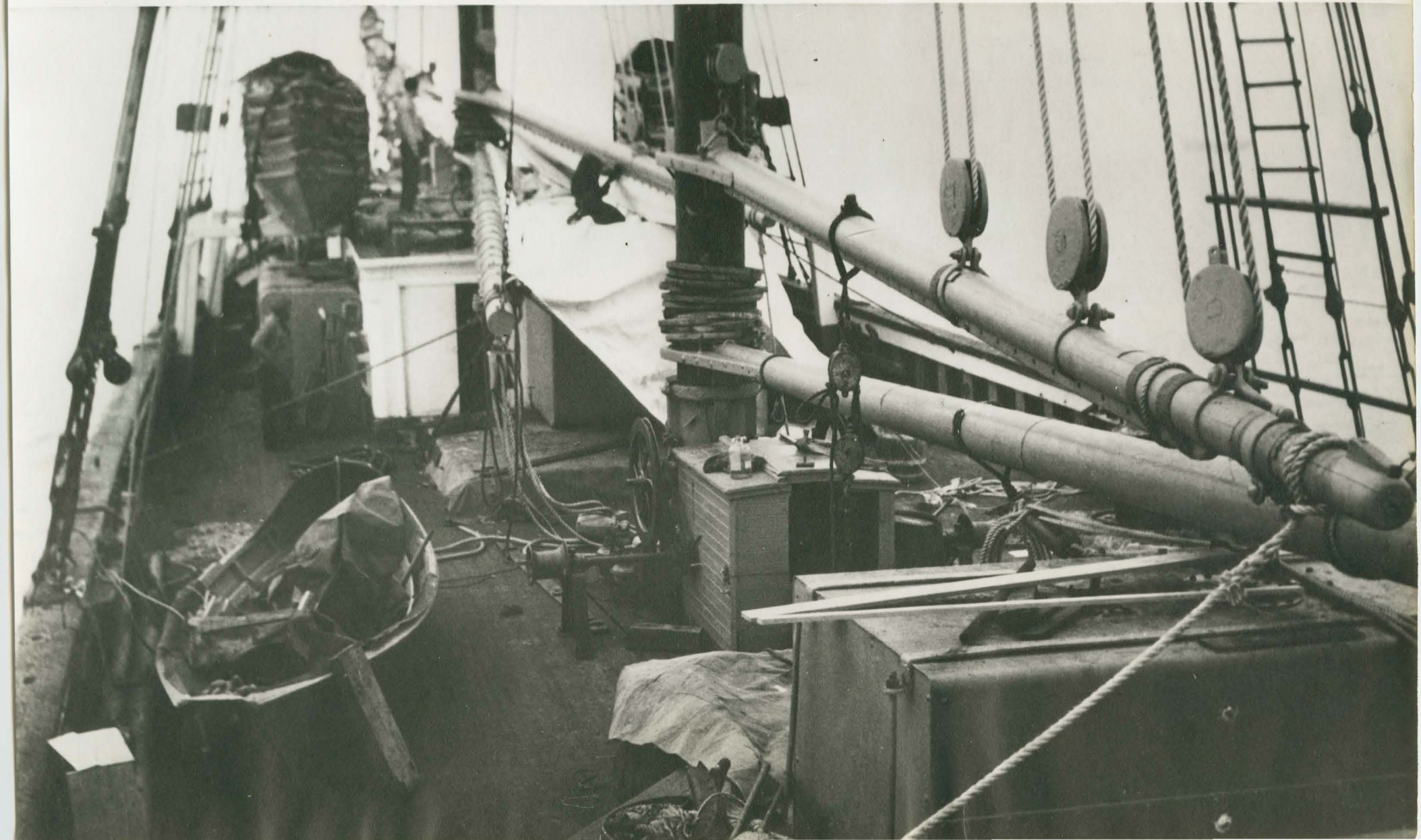
where it was cleaned, washed, split, and tiered right in the ships. There weren't any shore facilities to store them; just salt there -- that's all. When the schooner was gone, to refit for a fishing voyage, the men still continued to catch fish, and they salted them, same as we did on the ship, and tiered them. Left them there 'til the ship came back to take them out of there. The fish had to be handled again to load them. We had a pew you ram right into them, take five or six and throw them into the dory, and from the dory into the ship. We had a steam donkey to hoist them aboard. All the vessels got so they had a steam donkey, and some had a gasoline donkey. Steam was the first they had, then they kind of condemned steam because they had to carry a lot of coal and water, so they had mostly gasoline in the later years. There was a big tank on deck for the gasoline. We never carried gasoline below decks.

Dories

I was with the Union Codfish Co. when they started using outboard motors for their dories -- must have been about 1917. They were pretty good; they got by with them. They weren't as perfect as they are now, but they were good, and didn't have much trouble with them. The dories never had centerboards -- they were just flat-bottomed dories. Just sailed fair wind, more or less. When outboard motors first began to be used on the dories, the fishermen tried making wells in them, but it did not work. They took the wells out and put the motor on the stern again. There was too much wash around. Guess they got a system now that could handle it, but no matter what they did then, when they shut the engine down there was always a wash that came in around the spark plug and this and that, and what have you. They didn't have the system, I guess, at that time. It splashed around and the salt water got into the machinery.

DECK OF THE CODFISHERMAN LOUISE . .

The LOUISE, in 1937, carried outboard-powered dories nested on her boat skids. The large tank in the foreground is for gasoline.



The WM. H. SMITH had davits for the dories the last trip we made, but we nested them right up to then, and the outboards were slung over the stern. All those steel davits around the ship raised hell with the compass. You got a little binnacle lamp in there in an old sailing ship and it's hard to take an azimuth with all that stuff. Turn your god-damn compass three to four points. Those were heavy davits they got there.

We carried twenty-four dories on the CITY OF PAPEETE: one man to a dory, six in each nest, twelve on each side. We put them in the water with tackles, no boom, just tackles rigged to a stay and slung them over. The dories had big, heavy, strap-brackets, in the stern, and we had long hooks on deck and hooked them into the strap forward and aft.

The Eastern people were never sailors -- they were fishermen. They were born and raised in dories. That's all they knew -- just fish and dories. They couldn't get six feet off the deck; they got dizzy. The Nova Scotiamen and Newfoundlanders are good fishermen; they can handle the dories, they can handle the oars, plenty. All the dories we used were Eastern dories, flat-bottomed. They were much better made back East than the California dories. I think Neash built them here, but he never built them when I was in the game. We got all our dories from the East and I don't know where. I think Massachusetts someplace. We had nice boats -- sea boats -- you can't beat them. They lay on the water like a seagull. You could carry 200 fish in them -- two tons; but it's all according to the weather. They're good sea boats -- just like a skiff, they slide. In an average day a man could get two boatloads of fish.

At the end of the day the dories were all brought aboard. We made a practice of bringing them aboard even in the finest kind of weather.

You couldn't leave them astern -- they'd be banging against one another continuously. That was the practice amongst all the fishermen -- the dories were nested each night, six in each nest.

For equipment, they had just a sail. There was a gaff for fishing in later years. Before, we had a sprit to spread the sail, but in later years they did away with all that and used just one halliard and one gaff. Loose foot. And you had a boom, too. If you wanted to reef it down, you just rolled it up. They steered with an oar and had a rudder, too, and there was an anchor with twelve-thread line and no chain -- never used chain. The dories always anchored when they fished. The fisherman stood in the center and had one line out each side and two hooks on each line, with the line lowered to the bottom. We used to fish all the way from 18 to 30 fathoms, maybe 28. In 18 fathoms you're getting into pretty shallow water, but sometimes you get a good spot in 18 fathoms and get good fish there. When you go out to 30 fathoms, the fishermen wouldn't fish -- they say to hell with the fish -- too much work. They had enough line for sixty fathoms.

Fishing on the Banks

The decks were washed down at the end of the day after the dories were aboard. We had a pump for that -- washed it down every night. We built bins on deck for the fish with twelve-inch planks right across the decks. This was just to keep the fish from sliding all over. They were just portable bins, and we could set them up when we came to a bank and take them down later.

We didn't have a talleyman. I was the talleyman. There was never more than two come in at a time, sometimes three, and we had a clock, a punch device. The mate had a dory. That left me and the cook and the dress gang aboard. The fish were hauled up with a pew. I could take two

at a time with the clock in one hand and count on the other. There was a lot of cheating, too, but the fishermen had to accept the count. They were cheating all the time. They would count "59", then "71" -- up the count. They got paid according to the talisman and the weight. You got 10,000 fish and they weigh so much, you got paid accordingly. But they were only cheating on themselves, one cheating on the other -- there was only so much fish to split up among the crew at the end of the voyage. If one guy punches more on his tally, some other guy is going to wind up short. And most of the time, too, they squealed on one another.

The splitters and salters fished from the deck of the schooner while the dories were out. They got $30 a thousand. They got paid for every fish they brought up, of course, but they never got much. You come along to a new berth, you drop your anchor, and start fishing. It's all right; it's a new ground. But when the gang comes in with probably two or three thousand fish from all of those dories together, and we cut the heads and guts out of them and the bone, and by and by you have a gurry pile all around you, and as soon as that gurry pile comes down to the bottom the fish run away. Very few sharks up there. The good fish won't eat that gurry; it's only a sick fish that'll go for it. It rots and gets bad. So fishing over the rail is very little.

We never had stock anchors at Union Codfish . . . had regular anchors. We had too much trouble with the other and they were done away with years ago, but we used to use twelve-inch hawser and shackle between the two hawsers -- 60 feet each hawser. And after a while we did away with all that and used all chain. . . in the later years. You see, you had to have a shackle on the ground to the anchor, that's one shackle at 15 fathoms, to hold the anchor so she'd dig in, and another shackle in the

hawse pipes so you wouldn't chafe against the pipe or around the stem. We used only 60 fathom in average weather. Sometimes it's blowing up and you couldn't go out and fish, couldn't launch a dory on a bet. There wasn't enough chain, enough line to hold her, so we slacked out the other 60 fathoms. To get the hawser in, we spliced an eye with a thimble in it and shackled it into the chain. The last 15 fathom was in the hawse pipe and windlass. You couldn't have the hawser lying on the drum of the windlass and go through that hawse because that ship is rolling and working -- it would cut everything to hell. We had a shot of chain between the two hawsers -- in other words, there was chain, hawser, chain, hawser, and then chain again. The reason they used the hawser was because they figured the chain wouldn't work. In heavy weather when you start diving, that chain would hold you down. That's why they used the hawser -- the hawser was damn near floating, manila, and we'd cut a coil in two and have sixty on each side. The anchor would be on the bottom and we'd have one shot to that, then sixty fathoms of manila and that would bring it up to close to the pipe, then we'd shackle on another shot of chain, and that would be in the pipe and over the wildcat, and then inside of that would be another length of hawser.

On a rocky bottom it was more for safety if you had the chain there; you couldn't have the hawser laying on the bottom right next to the anchor. You had to have the chain there to hold everything down as much as possible. Codfish congregate mostly in rocky bottoms, rock and sand, and that's where their feeding ground is. That's where the shells and barnacles and everything grow. The whole Bering Sea is nothing but a sand flat anyhow -- from thirty to sixty fathoms.

To the other anchor we'd have straight chain. We never used it -- only in an emergency. We had one extra large hawse pipe so we could

ON THE BERING SEA BANKS . . .

The JOHN A. takes a sea aboard as she rides out a blow in the Bering Sea during the late 1930's. Another of J. E. Shields' vessels, the JOHN A. was similar to the C. A. THAYER.

The dories are nested and firmly secured, but the shifting boards, which formed bins used in handling the fish, are still in place.

heave the thimble through it. It wasn't exactly a thimble, it was a ring or a link -- you couldn't put a shackle through a thimble. It was spliced right onto a ring about nine inches in diameter, two inches thick. When the tide changes you swing. The Union Codfish Company changed the pipes throughout all their ships. They had to. They hauled the anchor right in, same as a steamboat anchor that you see today.

We had trouble getting the hawsers in, especially in deep water -- they would get slimy and slide on the drum. We had old-fashioned windlasses -- they never changed. You don't have a wildcat in this case. We have a wildcat on one side, and a drum on the other, and the chain takes several turns with the chain around the drum. When we'd get into that slimy water it would slide. We took it from around the drum and around the gypsy head on the same windlass, take a turn around it to hold it, to keep it from sliding out again. It was nothing but an old-fashioned rig, that's all. We hauled the anchor in by hand lots of times.

The CITY OF PAPEETE carried her fishermen below the deck in the hold. They had a bulkhead in there like it was the fo'c'sle, and a bulkhead here -- three-high bunks, and a skylight. To get on deck we had a small step, a scuttle -- a small hatch, in fact -- coming up aft. But it stinks like hell.

The salting stations were run by Union Fish and by the Greenbaum outfit -- Alaska Codfish Co. They had several stations up there, this side of Unimak Pass, before you get into the Bering Sea. The schooners didn't fish there -- those were just the stations. The schooners themselves went into the Bering Sea, in the summertime only, and started fishing just inside the Pass, around Dublin Bay, and then we'd keep on moving north until you get way up towards the canneries. Up to July and

August it seems that the fish are traveling. They turn westward, and we follow. Then they come down toward Ugashik and turn westward again. That's about as far as you can go -- you get up into shallow water. You can't find the fish in shallow water -- they're deep water fish, bottom fish. The shallower the water, the lousier the fish you get -- the deeper the water, the better the fish.

Slime Bank is right inside Unimak Pass, after you come inside the Bering Sea, to the North and right. It's supposed to be one of the best grounds, but the fishermen wouldn't fish there because there's so much slime. There wasn't any limit in depth, but the fishermen had a limit of their own: if it was too deep they wouldn't fish there, and that's another reason they wouldn't fish the Slime Bank. I was paid by tonnage and I went along with the fishermen; otherwise you come home broke.

Fishermen were paid so much a thousand -- 25, 27, 28 dollars a thousand, and after I gave up the game and during the War, I think they were getting a hundred dollars a thousand, and still they weren't making money. If there were no fish, there was no pay -- no guarantee of any kind.

I never ran into any seasons that were too bad -- they were about average. The fish at that time was all according to your weather. If you got a nice summer, you got a nice catch, but if the weather is bad, which happened quite often -- and that goes for the salmon men, too, they're up against it. The weather had a lot to do with it. The fish go into shallower water where the bottom is smooth, and you can go out. There are a lot of days that the cod fishermen can't go out fishing, you can't launch the dories the weather is so bad. Lots of days you can't launch a dory. In nice weather the fish are in shallower water -- in bad weather they go into deeper water.

The schooner had to be moved every night, sometimes, and when it was calm, nice weather, and you could sail, I'd heave the anchor off the bottom and drift with the tide. It's a strong tide -- nine miles an hour up there. You have a twenty-two or three foot drift up there, heaving just clear of the bottom and drifting with the tide. I figure three, four, or five miles in a couple, three or four hours. But if you got a breeze and figured you had to get out of there, you heave up and set sail, and move say ten miles. You just have to follow the fish around the Bering Sea.

You follow the fish to the North, then to the West, and there's no use going back to the Eastern again after that. You finish up. About a hundred miles on each leg, the whole works. We started fishing as soon as we got inside the Pass -- in Dublin Bay. You couldn't lay there because the wind comes down there so strong. It lasts for an hour or two, and you just got to get out of there. But there's a lot of fish in there. The storms come down in there, and there's a gale of wind down that mountain -- you can't fish there much.

The ice never bothered us. We didn't get up to the ice until later in the summer. We'd start up in the West and come to the Norther, and by the time we got up to the end where the ice pack is, it was more or less gone. It's the salmon packers -- they get it. They go right up to Nushagak, and that's in April, too. We didn't get up there until a month later.

I couldn't carry a full load of water up North. I had to water up once during the summer. We'd go in to the beach in the Bering Sea to a stream. We knew where it was -- had it down on the chart. We had forty or fifty barrels, put three or four in each dory, filled the barrels and pumped it aboard with a suction pump. Our water tanks were on deck. When I went fishing we didn't have the outboard motors, so didn't carry gasoline. The tanks were wooden, and it would take three or four hours

to water up in the creek. It was kind of risky. You had to get close to the beach with the schooners. A hell of a job to anchor and a hell of a job getting off again. You had to watch your chance -- get your sails regulated so she would swing the right way when you lifted the anchor.

The Coast Guard cutter would come out with the mail about once a month from their base in Dutch Harbor. We had a guy lost his hand; got tangled up in the belt in the gas pumping engine, between the two cogs and wheels and just cut him across. We had a wireless that time and we wired the Coast Guard at Dutch Harbor and they came out as fast as they possibly could.

I was the first one that had wireless -- in the GOLDEN STATE, in 1937 when we went up to the Japs, and I couldn't use it because I had a kid that didn't know nothing. He'd say he spotted the ships -- the Japs -- and was trying to give me the latitude or longitude, and I'd tell him, "I can see it now myself." The same thing happened when I came in to Pt. Reyes. It was foggy as hell, and we came into Pt. Reyes bound for San Francisco. He said, "I think I can spot Pt. Reyes," and I sail "I think I can see it too, now." But in the WM. H. SMITH I had a good set and a good man. It worked like a charm -- it was 100%. I sailed right in and never saw Pt. Reyes, the Farallones, or anything else. I sailed in right into the lightship on the wireless bearings. He was good, that guy.

Codfish Skippers and Codfishermen

Most of the captains that went up there started fishing in the dories -- they had the experience and later on they became captains. They usually had their places spotted to fish from experience. I had all my places spotted out right on the chart, even the longitude and latitude,

the bearings, and the mountains, and all that stuff, and I think the rest of them must have had the same thing. If you had gone up there the summer before in a good spot, a good sandy spot, you spotted it on the chart for next summer, and you kept your charts year after year.

The ships fished three or four miles apart, more or less; they didn't like to see you come too close to any of them. All the Seattle schooners were there, and we had three or four of them from here. The W. H. DIMOND was there -- I was in her in the Okhostk Sea in 1908. She piled up just outside the codfish station we were talking about. Captain Perlberg had her.

We carried only one spare dory, we had no room for any more. When the weather got bad it would happen that dories from other ships would shelter with us. I lost two men up there -- one on the PAPEETE and one on the WM. H. SMITH. . . a little German. . . I forgot his name. They were going out fishing one morning and it started to blow up; everybody came on board but him. I only had the two summers on this ship in the Bering Sea -- around 1937-38. "Codfish" Kelly had her for her last year, 1939. He had her two summers.

After the Union Codfish plant burned up [1939] they never started up. I lost my good sextant, too; it was a beaut. I left it over there and was going to come back the next day. They say it burned up, but I think somebody swiped it. The boss over there, I think he got it. I was working for them right up to that time in the SMITH. I never sailed on the LOUISE or GALILEE. I never had the BEULAH codfishing -- Eire had her for one or two trips -- she didn't make very many trips codfishing.

I think it was in 1939 that I left the SMITH, the last trip I made, or it might have been 1938. 1939 I had the HALE, and the year before

I had the SMITH in 1937 and 1938, two seasons. I was in the CITY OF PAPEETE seven years. I went with Associated, then back in CITY OF PAPEETE the second time, and then back in the Associated Oil Co. again, drifting around.

Bob Furt ran the MAWEEMA. He put her ashore on Seal Islands up in the Bering Sea. There was the MAWEEMA and WAWONA. They were both put up on the beach there -- loaded with fish, too. On the Pribilof Islands. He went back home and never came back there again. Home was Prince Edward Island, somewhere around there. He could chew tobacco, swallow the juice and whiskey.

I don't know of any other Union Codfish skippers still around. Some of the masters in the schooners were Hansen, Eire, Kelly -- he was there only about two years. Kelly and Hansen didn't get along. They were fighting over who was going to get the best fishermen, and the fellow that bought the most booze got the fishermen. Good ones were hard to get. You had to get them drunk and shanghai them, and get them aboard, and all that stuff. We had a hell of a time holding them, too, after we got them aboard. Some of them jumped overboard and swam ashore or somebody picked them up.

We got the fishermen just off East St., or where they were hanging around, around the boarding houses. The codfishermen didn't belong to the Sailors' Union -- only the salmon fishermen. In 1924 or '25 they tried to organize the codfishermen but they didn't care about their conditions or pay and the whole thing was given up. Some of them joined up, then gave it up, too.

Nova Scotiamen and Scandinavians were the fishermen -- Newfoundlanders. Very seldom we had an Italian. We took greenhorns (.

occasionally because we couldn't get all old men. Quite a job to get them together. I did the hiring. I knew where they hung out, where I could find them drunk -- I could never find them sober -- so I had to get them drunker than they were and shanghai them into the launch. I had a contract with Crowley. Soon as I got one -- I even got a couple of policemen to help me drag them down there to the dock; I'd take them aboard and there would be two or three standing at the rail wanting to go back again.

In the WM. H. SMITH, which had topsails, I had no trouble getting them. The fishermen are broken in for that; they're good sailors, but they didn't want to go in topsail schooners -- they didn't want to do all that climbing. CITY OF PAPEETE had topsails, and nobody wanted to go in her on account of the topsails. They liked the baldheaders -- they didn't have to climb. They had the fishermen's staysails that they hoist right from the deck, and take them back to the deck.

There's no more codfishing up there anymore. They gave up the stations and everything completely. But Union Codfish Co. is still in business here. They get all their codfish now mostly from Halifax, Nova Scotia. Cox is running it now -- he must be damned near eighty. He was the big shot many years. Greenbaum was Alaska Codfish Co; they're all dead. But Cox is still alive, and he's still in the codfishing business.

Alaska Codfish Co. had CITY OF PAPEETE, MAWEEMA, GLENDALE, WAWONA, and several others. I worked for them in CITY OF PAPEETE. The Union Codfish Co. that burned up was in Richardson's Bay, and the Alaska Codfish Co. had their fishyard at Redwood City. They'd take the schooners down there and tie them up during the winter. It was a mile outside Redwood City. If you wanted to go to town, you had to get a dory and row in. Their schooners were all painted green, too. As far back as I can remember they were all painted green.